

## Federal financing of health surveillance in Brazil from 2005 to 2012: an analysis of distribution of resources

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**Abstract** *Health Surveillance carries out a set of actions to prevent health risks related to the consumption of products and the provision of services under the Unified Health System (SUS). The implementation of Health Surveillance actions relies heavily on the federal funding policy, which induces its decentralization. This text aims to analyze the federal funding of Health Surveillance to States and Municipalities from the scheduled onlendings in the period 2005-2012. Among the main results are the increase of per capita values, steady at around the mean value of R\$ 1.25/inhabitant/year; the increased number of municipalities that agreed to carry out strategic actions; and a stable trend in the proportions of each federated entity at around 50% to Municipalities, 25% to state federated entities and 20% to the Central Public Health Laboratories (LACENs). Results show that the adoption of unified nationwide per capita values caused distortions that indicate inequity among state territories, pointing to the need to clarify the concept of equity in financing under the National Health Surveillance System and to broaden the discussion on the currently used allocation criteria.*

**Key words** *Health Surveillance, Funding, Equity in health, Decentralization, Planning*

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## Introduction

Health Surveillance is responsible for a set of actions developed by the Unified Health System (SUS) and a citizens' right enshrined in the 1988 Federal Constitution. In Brazil, these actions must be performed by the National Health Surveillance System (SNVS), consisting of The National Health Surveillance Agency (Anvisa), Health Surveillance services of states and municipalities and official analytical laboratories - the Central Public Health Laboratories (LACENs) and the National Institute of Quality in Health (INCQS) and the Oswaldo Cruz Foundation. These typical state actions seek to protect the health of the population and includes systematic processes of identification, management and communication of health risks related to the production and consumption of products and the provision of services.

A study on the implementation of the SNVS points to the need to increase the debate about decentralization and the organization of this system, which would be developing irregularly over time and in disarray with other SUS<sup>1</sup> actions. This system faces difficulties in structuring and working cooperatively, and contributing factors are the peculiar nature of these activities in the area of health, the unstable decentralization project – including the varying criteria for financial onlending to subnational entities – and the small volume of resources transferred to states and municipalities<sup>2</sup>, resulting from per capita amounts of Real cents, unified nationwide.

SUS funding is inherent to the three federated entities and the relative share of state and municipal resources has increased<sup>3</sup>. In the case of Health Surveillance, states and, especially, municipalities are dependent on federal onlending to carry out their actions. One of the explanations may be the predominance of low financial contributions from these spheres of government, which are responsible for the “payroll of surveillance staff – generally scarce and poorly paid – and the structure – almost always precarious, made available for their work”<sup>2</sup>. Therefore, federal funding for Health Surveillance – not only the actual onlendings made, but also the available schedule for their implementation – is an important inducing mechanism for decentralizing these actions to increase access and equitable distribution of resources.

The analysis of the profile of 50 indexed publications on Health Surveillance pointed to the concentration of texts in two national journals;

predominance of qualitative approach (56%); preference for SNVS policies, organization and management fields (66%); and a large percentage of texts (92%) classified with evidence level-6, which has the lowest potential to reliably list the impact of the interventions studied<sup>4</sup>. Despite the indicated preference for the area, a recent survey in the same bibliographic database did not show an indexed scientific publication that evidenced funding and Health Surveillance as a subject or in the abstract.

Funding is a broad topic, involving diverse aspects – sources, magnitude of resources, revenue and expenditure – at least for its importance, it was hoped that federal funding of SNVS through scheduled onlending to states and municipalities would be addressed. Also in the studies on public expenditures in the SUS<sup>5-7</sup>, no publications that mention Health Surveillance funding have been identified – a government, therefore public expenditure, and the application of the concept of equity to these actions or their funding. This study seeks to contribute to reducing the gap on federal funding and to support later reflections on equity in SNVS or its financing.

Equity is defined as the lack of avoidable or remediable differences between populations or social groups, economically, demographically or geographically defined<sup>8</sup>. The goal of a policy for equity is not to eliminate all differences, but to reduce or eliminate those that result from avoidable or unfair factors; thus, equity is the search for the creation of equal opportunities for health and reduction at the lowest possible gap<sup>9</sup>. Equity would be a normative concept<sup>10</sup> compared to measurable health empirical indicators for value judgments.

Despite studies on the concept of equity and consensus on the need to increase it, there is no convergence to support the different proposals for its operationalization in people's health care. There is an extensive discussion about what needs are and who defines them, and what is fair varies in each society and in each historical context in a given society. In addition to these difficulties, this concept does not have immediate and unambiguous application for Health Surveillance, given the singularity of this public health action, which is usually not addressed directly to the citizen, but to the community or to the company or economic activity.

The concept of equity refers mainly to individuals and population groups and to their health gradients measured by means of indicators. It also refers to the tax area or the financing

of social policies, especially health. In the tax area, it is informed by the level of justice involving tax progressivity or regressivity. In health funding, it takes into account justice in the distribution of public resources and private spending by individuals and families. In Health Surveillance, it is not discussed, although a greater contribution of resources and redistribution of resources are demanded, in view of the loco-regional peculiarities and inequalities in the different territories of the country.

There is a lack of systematic analysis of the various services underlying the SNVS and a lack of scientific studies on Health Surveillance funding. In addition, the inequality that marks the Brazilian federation raises questions about whether federal onlendings based on unified nationwide per capita values can result in equitable distribution among government spheres, regions of the country and state territories.

This paper aims to show an analysis of federal funding of Health Surveillance actions and their distributive potential regarding scheduled onlendings from 2005 to 2012.

## Methodology

A longitudinal *ex post facto* study was carried out with a descriptive objective, which adopted a mixed approach, and collection procedures were bibliographical and documentary research<sup>11-13</sup>, as well as secondary data review. This was a national study that considered all the Brazilian municipalities, the 26 states and the Federal District.

The bibliographic research on Health Surveillance, equity and funding of the SUS subsidized the questioning of the topic and the discussion of results. Documentary research on the federal funding of Health Surveillance covered all Ministry of Health Ordinances of the period showing financial values scheduled for transfer to Health Surveillance actions, except for Ordinance MS 4.163/2010, which allocates values to municipal laboratories, an exception in the period studied. The following Ordinances MS were considered: 432, in 2005; 1.161, 2.476, 2.940, in 2006; 1.998, 3.271 and 3.202, in 2007; 133 and 3.080, in 2008; 1.228, 3.232 and 3.235, in 2009; 1.106, 3.012 and 4.164, in 2010; 1.397, 2.500, 2.980, 2.981 and 2.982, in 2011; 926, 2.447, 2.792, 2.793, 2.794, 2.795, 2.796, 2.797 and 2.801, in 2012.

The period starts in 2005, when Ordinance MS 2.473/2003<sup>14</sup> was in force, when the municipalities were able to agree on the strategic actions

of health risk management; and the year 2012, year of Complementary Law 141/2012<sup>15</sup>.

The quantitative analysis of the financial values in the ordinances required the conversion of the files from a PDF format to spreadsheets. In this procedure, necessary due to the lack of a database or other electronic format that could be used to gather data analyzed – values of programmed onlendings – we sought to ensure data quality through double entry and verification. Onlendings to the INCQS included in the ministerial ordinances were not taken into account due to their linkages with the federal sphere of government.

The federal resources that are the object of this analysis are part of Health Surveillance's funding bloc since 2007 and are geared to the costing of actions. The retrospective longitudinal analysis facilitated the annual systematization, in a single database, of the IBGE population used in the onlending, the total number of municipalities and the number of municipalities that agreed to strategic actions, and total R\$ transferred as: minimum structuring level and minimum strategic level for municipalities; minimum strategic level for states; incentives to LACENs; and management, HR training and others.

The resources transferred and R\$ per capita/inhabitant per year were calculated for each state territory, which was also taken for the analysis unit. It includes State – addressed as a federated entity, a set of Municipalities and the corresponding LACEN. For comparison purposes, total per capita values were monetarily adjusted for the General Price Index-Market (IGP-M) at December 31, 2012 values.

## Results

The Federal Government represented by Anvisa, from 2005 to 2012, allocated resources for Health Surveillance actions within SNVS through regular and automatic onlendings that, having changed their name throughout the period, kept the same distribution logic based on unified per capita figures for the whole country, and they are: “structuring for municipalities”, with adoption of a national minimum value, from 2007; “strategic for municipalities”; and “strategic for states”, with a national minimum value, established in 2001. The regular onlendings called “strategic” were intended to carry out health risk management actions. Resources were also earmarked for specific purposes rather than capitation, for example, to LACENs and training human resources.

The analysis of the extensive legislation and the criteria used produced a set of results shown below. The first result was the systematization in a single database of the financial values programmed for onlending by Anvisa, which synthesizes almost a decade of the financial onlending policy, whose values are shown in a compact form in Table 1, which also indicates the IBGE population used to calculate the values.

A population increase of 5.95% between 2005 and 2012 is observed and, from 2006 to 2008, the population used was repeated, which may distort the per capita values calculated for those years and tend to mask increases.

Capitation is the preponderant, but not the only criterion for calculating the amounts to be transferred, so that total amounts in Reais distort the direct comparison between the analysis units. Therefore, these aggregate amounts were transformed into per capita amounts, corresponding to the second result. Figure 1 shows that, since 2008, per capita value in the five regions of the country is higher than R\$ 1.00 /inhabitant/year, except for the consideration with regard to the population used in the calculation; and that for the Midwest and North regions, the programmed values are higher than for the other regions, ranging from R\$ 1.09/ inhabitant/year to R\$ 1.7/ inhabitant/year.

The adoption of the state territory as an analysis unit showed that, as of 2009, most of these territories received a per capita value higher than R\$ 1.00/inhab/year, despite the extreme values identified in the studied period: R\$ 0.412/inhab/year for Amazonas in 2005; and R\$ 3.76/inhab/year for Roraima in 2010. It was also verified that the region of the country is not a satisfactory explanatory criterion for different per capita values transferred to the state territories, since, when considering 2012, several state territories received onlendings of R\$ 1.5/inhab/year (AC, AL, AM, GO, MS, RO, TO, SC), while others received lower onlendings, but not less than R\$ 1.35/inhab/year.

The third result was the mean proportion of municipalities that agreed to carry out strategic Health Surveillance actions. There was a significant increase over the period studied in the five regions of the country, especially as of 2010. In 2012, the proportion of municipalities that agreed by region corresponded to 80.7% (North), 56.9% (Northeast), 58.7% (Midwest), 79.1% (Southeast) and 72.3% (South). Among the states in each region, the proportion of municipalities in agreement varied widely, with

the Northeast showing the lowest proportions, notably the states of Pernambuco and Paraíba, with less than 15% of municipalities that agreed. Ordinances referring to 2008 and 2009 did not show the number of municipalities that agreed, so these years were not considered.

The fourth result was obtained from the consideration of the financial loss of the currency occurred in relation to intended per capita annual onlendings that were monetarily restated by the IGP-M to values as of 31/12/2012, by multiplying the values by an annual adjustment factor, whose results are shown in Figure 2. As can be seen, since 2007, the federal sphere has programmed onlending ranging from R\$ 1.238 to R\$ 1.442/inhab/year with a stable trend at around R\$ 1.25/inhab/year, even considering the inaccurate population used in 2007 and 2008.

The fifth result is related to the specification of the structure of scheduled onlendings in relation to the proportions of total values in R\$/year allocated to five major categories, distinguished by government sphere to which they are intended: Municipality (Structuring M-P and Strategic M-P) and States (Strategic E-P, E-LACEN and E-Management, HR and others), see Figure 3.

Regarding the two types of resources transferred to the Municipal level (M), the amounts transferred as minimum structuring level include the largest amounts of the total resource, with a stable trend at 36%-40% of total values, in R\$/year, while the minimum strategic level proportions ranged from 13% to 16%. Consequently, in the period under investigation, the municipal level received between 49.7% (36+13.7) and 58.7% (43.4+19.8) of the entire resource transferred by Anvisa to SNVS, with a stable trend at 50%-56%, especially in the period 2010-2012.

For the state sphere (E), in 2005 and 2006, the minimum strategic level was the only modality for services, in addition to resources for LACENs, also belonging to that sphere. The state level received between 24.7% and 33% of the total values, in R\$/year to perform more technologically complex/dense actions, with a stable trend at 24%-26%; except for 2005 and 2006.

As of 2007, the resources allocated to LACENs show a growth trend of around 20%, with amounts that were subtracted from the amounts previously transferred to the State entity. When observed in 2012, LACENs received percentages (21.9%) at the same level of magnitude as the State federated entities (24.7%), which seems to signal the adoption of a specific policy for this type of action. Resources transferred to Manage-

**Table 1.** Federal onlendings for Health Surveillance and population, by year and state territory. Brazil, 2005 to 2012, in thousands of Reais, current values.

State territory	2005	2006	2007	2008	2009	2010	2011	2012
Acre	584,12	603,77	1436,80	1558,13	1195,39	1752,45	1272,75	1689,03
Alagoas	1312,69	1359,44	2588,71	3480,77	3035,53	3219,31	3253,56	5983,61
Amapá	548,46	575,87	1045,74	1627,63	1153,09	1813,23	1332,47	2148,15
Amazonas	1293,28	1379,13	2466,17	3668,80	3042,07	4768,20	6564,03	4773,51
Bahia	6291,98	6392,37	10658,48	14114,40	13068,71	12567,90	15187,62	13697,81
Ceará	3592,53	3802,78	6121,76	8435,59	7720,33	8265,95	11582,36	10482,57
Distrito Federal	1120,75	1166,61	1838,70	2816,98	2515,23	2173,38	3720,74	3000,49
Espírito Santo	1464,14	1535,76	2679,88	3897,04	3228,38	3685,25	3714,07	4034,07
Goiás	3174,68	3477,95	5333,56	7495,40	6779,77	7139,29	7275,59	9190,96
Maranhão	2534,78	2635,31	4799,36	6552,82	5867,57	7915,70	5608,80	6265,92
Mato Grosso	1451,33	1509,99	3013,00	4003,92	3251,15	4736,42	5741,93	4432,90
Mato Grosso do Sul	1202,34	1244,00	2208,31	2945,77	2391,79	2733,27	2768,73	4203,28
Minas Gerais	10724,43	11130,96	18387,51	22337,77	21427,78	21385,99	24829,34	26595,55
Pará	3240,30	3355,30	5494,08	7210,43	6503,78	9880,67	7143,74	11401,67
Paraíba	1552,10	1586,19	3506,22	4783,38	4144,19	4077,63	4091,57	4421,26
Paraná	6530,07	6801,50	10801,53	12395,38	11531,37	11866,91	14153,13	14173,51
Pernambuco	4019,69	4147,54	6651,15	8695,39	7954,82	7621,79	10858,65	8729,67
Piauí	1249,54	1284,91	3134,58	4251,00	3717,24	3970,98	3978,10	4270,57
Rio de Janeiro	11632,63	11666,20	14740,52	17356,04	16236,49	15748,59	19374,51	17893,91
Rio Grande do Norte	1322,96	1376,01	2993,03	4424,16	3893,98	3711,37	6842,98	4414,96
Rio Grande do Sul	6161,11	6358,90	10642,43	12994,26	12043,17	11498,06	13818,19	13697,56
Rondônia	809,67	830,73	1529,41	2344,00	1733,23	2617,14	2044,69	2730,47
Roraima	510,63	519,26	882,13	1382,35	1033,13	1584,89	1101,35	1515,85
Santa Catarina	3790,64	3866,16	6367,22	7813,47	7125,70	7494,68	7580,97	10122,76
São Paulo	28628,74	29964,86	40057,90	42359,24	41369,36	42583,85	46289,17	46548,91
Sergipe	1047,73	1079,56	1912,35	2585,44	2120,18	2197,51	2218,57	2505,69
Tocantins	741,44	761,18	1936,03	2663,71	2179,71	2854,96	2375,08	3092,24
Total	106532,76	110412,24	173226,56	214193,28	196263,14	209865,37	234722,69	242016,88
Population	181581024	184184264	184184264	184184264	189612814	191480630	191506729	192379287

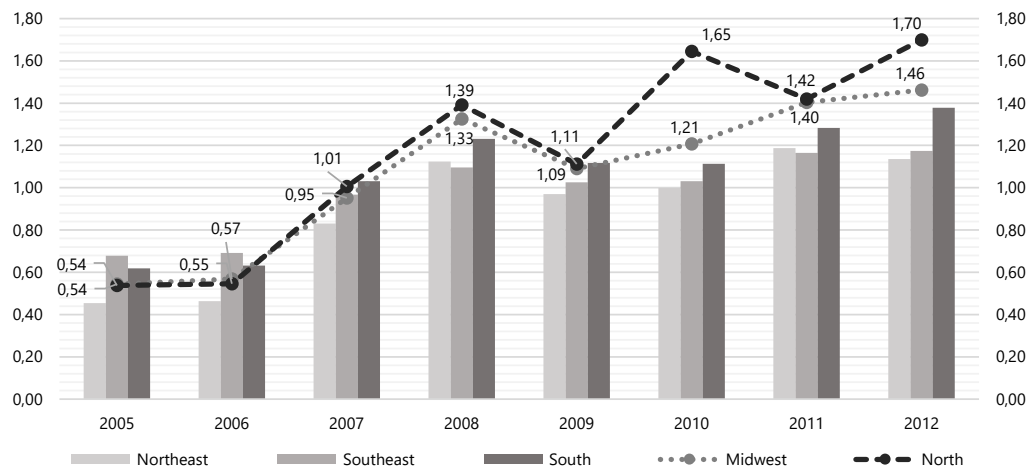
Source: Own elaboration from the standards for onlendings to health surveillance issued by the Ministry of Health in the period studied.

ment, HR and others are temporary and involve the smallest share of resources, stable at around 5% since it was established in 2008.

Summarizing the analysis of the proportions of total federal onlendings programmed in R\$/year for Health Surveillance by type and destination, there is a stable trend of around 50% for

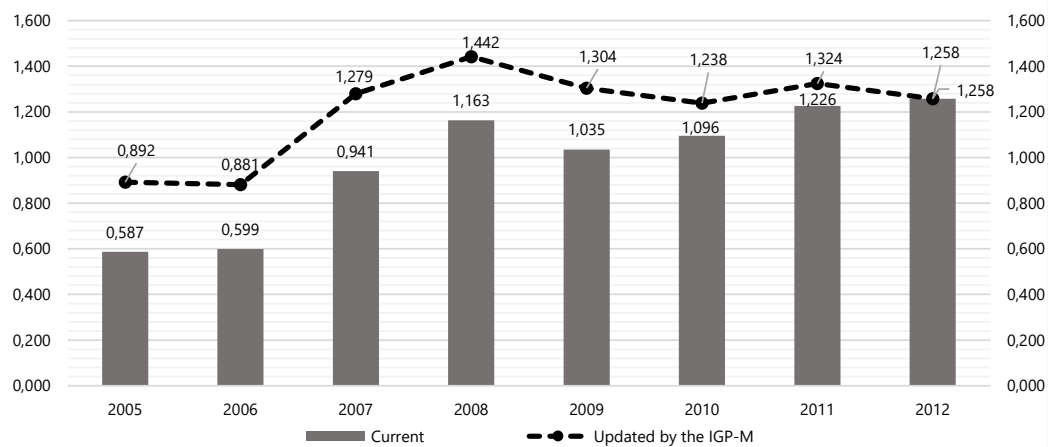
municipalities, 25% for State federated entities, 20% for LACENs and 5% for Management, HR and others. Worth highlighting is the progressive reduction of resources transferred to the State entity, as of 2007, as a minimum strategic level.

The sixth result obtained was the distribution of the per capita values by state territory for each



**Figure 1.** Federal onlendings for Health Surveillance, in per capita values, by region and year. Brazil, from 2005 to 2012, in Reais, current values.

Source: Own elaboration from the standards for onlendings to health surveillance issued by the Ministry of Health in the period studied.



**Figure 2.** Federal onlendings for Health Surveillance, in per capita values, Brazil, from 2005 to 2012, in Reais, current and updated values for 2012.

Source: Own elaboration from the standards for onlendings to health surveillance issued by the Ministry of Health in the period studied.

of the five major categories, distinguished by destination management level, in this text illustrated for 2012 in Figure 4.

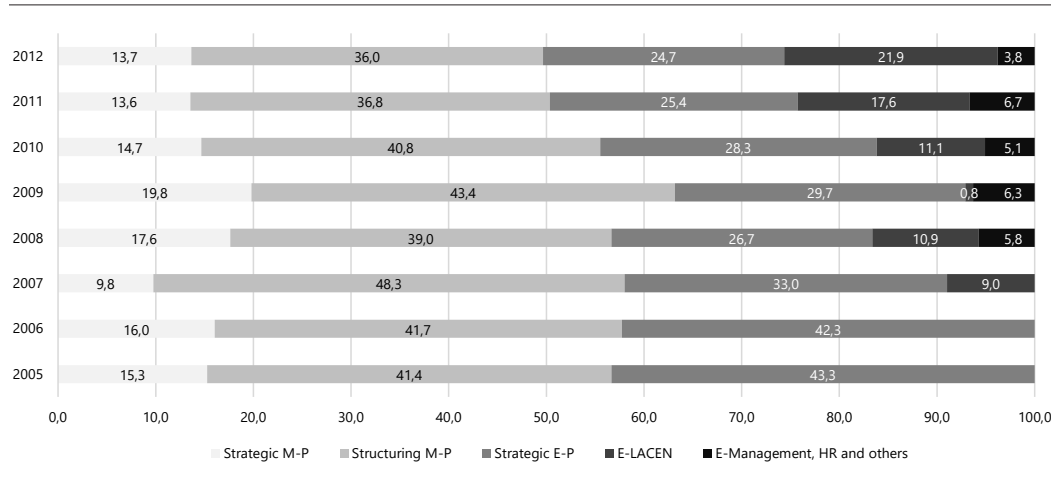
In this year, important differences in the onlendings of the minimum structuring level were observed: some state territories (AM, PA, CE, PE, RJ and DF) received values ranging from R\$ 0.36/

inhab/year to R\$ 0.40/inhab/year; others (TO, PB, PI, RN, MG, PR, RS, SC, GO and MT) received values ranging from R\$ 0.50/inhab/year to R\$ 0.84/inhab/year. A similar situation occurred for the onlendings of the minimum strategic level: some states (BA, MA, PB, RS and MT) received values between R\$ 0.08/inhab/year and R\$

0.12/inhab/year, while the others received values higher than R\$ 0.19/inhab/year.

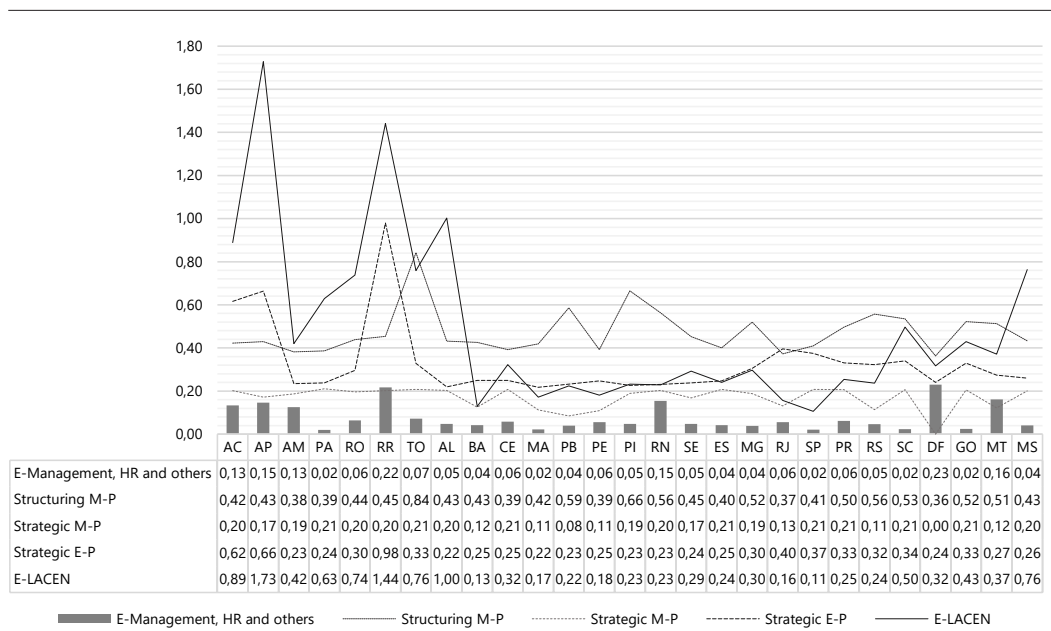
In relation to funds transferred to the State entity in that year, it can be observed that the state minimum strategic level did not have a homoge-

neous distribution since the States of AC, AP and RR received values between R\$ 0.62/inhab/year and R\$ 0.98/inhab/year, while the others received values between R\$ 0.22/inhab/year and R\$ 0.40/inhab/year.



**Figure 3.** Percentage distribution of federal onlendings to Health Surveillance by type and purpose, per year. Brazil, 2005 to 2012.

Source: Own elaboration from the standards for onlendings to health surveillance issued by the Ministry of Health in the period studied.



**Figure 4.** Per capita federal onlending to Health Surveillance, by State territory and onlending type, Brazil, 2012, in Reais.

Source: Own elaboration from the standards for onlendings to health surveillance issued by the Ministry of Health in the period studied.



The scheduled onlending to LACENs were distorted, since the distribution of federal resources to them does not follow the population logic. LACENs located in AC, AP, PA, RO, RR, TO, AL and MS received values higher than R\$ 0.63/inhab/year, with a maximum value of R\$ 1.73/inhab/year (AP); the others received values lower than R\$ 0.43/inhab/year, with a minimum of R\$ 0.11/inhab/year (SP).

Resources transferred for Management, HR and others evidenced the same disparity, given that some states (AC, AP, AM, RR, RN, DF and MT) received values between R\$ 0.13/inhab/year and R\$ 0.23/inhab/year, while all others received values lower than R\$ 0.07/inhab/year.

## Discussion

The results obtained indicate Health Surveillance's achievement and maintenance of space within the SUS, either by consistency in the periodicity of scheduled onlending (Result 1), by the increase in nominal values (Result 2) or by maintaining the monetary adjustment of per capita values (Result 4). An important increase was also observed in the five regions of the country with regard to the average proportion of municipalities that agreed to carry out strategic Health Surveillance actions in the period analyzed (Result 3).

The methodological option to focus on the federal programmed onlendings implies observing the distributive policy adopted, and a lack of homogeneity was noted in the distribution of onlendings by the federal entity, with disparities between the regions of the country and state territories. However, this approach is somehow limited to not taking into account the fundraising and allocation of resources arising from the use of administrative police power of surveillance, and since the totality of the planned onlending may not have actually occurred due to the lack of specific agreement or financial blockade, due to the lack information systems' feeding.

Federal transfers based on per capita values unified nationwide are potentially inequitable in the face of inequalities. The introduction of the minimum state level<sup>16</sup>, in 2001, via an agreement between State Health Surveillance services and Anvisa, aimed to promote greater allocative justice by redistributing resources from the richer and more populous regions to the states with the lowest population and service network. This level was initially set at R\$ 420,000 and benefited the six states with the smallest population: AC, AP,

RR, RO, TO and SE.

With the establishment of the minimum municipal level<sup>17</sup> at R\$ 7,200 per year, in 2007, a similar attempt was made to rebalance supposed inequalities due to size disparities. The Brazilian mean of municipalities with less than 20,000 inhabitants is slightly higher than 68%. Only the states of PA, RJ, AM, PE and CE have less than 50% of the total of small municipalities, which explains the smaller magnitude of resources transferred to the municipalities of these states as a minimum structuring level. There are extreme cases, such as RR, RN, PB, PI and TO, in which the proportion of small municipalities ranges from 80% to 92% of the total municipalities.

The analysis of the federal funding of Health Surveillance actions, regarding scheduled onlendings for the period 2005-2012 did not show increased equity in the financing of Health Surveillance related to the need to carry out actions. Since resources for Health Surveillance are scarce, and they are insofar as the lowest per capita values established in the health field are used, a greater level of distribution tends to result in pulverized resources, that is, in greater inefficiency.

At the same time, the need to carry out Health Surveillance actions aimed at managing the health risks involved in the production and consumption of goods and in the provision of services of interest to health seem to accompany the population concentration, and a greater redistribution to the locations with population concentration can become socially unfair and more inequitable.

In addition, the sharing of resources in the federation has benefited small municipalities and capitals to the detriment of medium-sized municipalities, and in any case, size is not the only fundamental characteristic to establish inequality between municipalities<sup>18</sup>. The two smallest municipalities in the country, namely, Serra da Saudade (MG) and Borá (SP) are disparate in relation to municipal public finances and the HDI.

The per capita transfer of structuring resources to municipalities can be characterized as a strategy to promote greater horizontal equity in the provision of Health Surveillance actions, given the objective of strengthening the system and implementing Health Surveillance actions in territories where they were not yet developed. However, it must be considered that equity in Health Surveillance funding is different from equality in the provision of actions, and that health inequities do not necessarily mean inequities in Health Surveillance.



As for the strategic resources intended for the States, a reduced proportion of these resources allocated to State's risk management was observed, which can be seen in Figure 3 and had previously been pointed out as a trend<sup>18</sup>.

From the viewpoint of regional distribution of resources for Health Surveillance actions, since 2008, the Midwest and North regions have received higher values than the others, ranging from R\$ 1.09/inhab/ year to R\$ 1.70/inhab/year. This redirection of resources to these regions would be in favor of greater equity in health; however, since we are dealing with Health Surveillance, it is necessary to consider that it is mandatory to estimate the need to carry out health risk management actions.

Thus, it is necessary to consider the possibility of there being different minimum municipal levels for each state territory and among State federated entities. The selection of the neediest is central to the elaboration of any proposal that seeks to allocate or change the allocation of resources in a more equitable manner.

It is interesting to note that federal onlending strategies stem from a criterion with emphasis on the individual, when proposing per capita onlending; however, in their implementation, they use logic that is dependent on the way in which Health Surveillance services are structured in the municipalities of the country, by adopting minimum levels, which produces a considerable disparity in the resource allocation among state territories (Results 5 and 6).

These results allowed us to question the equity of federal level transfers intentions by type and purpose and to state territories resulting from the adoption of a similar national minimum value (minimum strategic level for States and minimum structuring level for Municipalities), regardless of the number of municipalities in a given state territory. Decentralization of Health Surveillance actions involves defining the role of states in the implementation of these actions and the assumption by municipalities of actions that are not exclusive to other spheres. In practice, most municipalities opt to carry out only part of the list of actions for an indefinite period of time, which raises the question of whether the federal financing policy has effectively stimulated decentralized actions.

The possibility of choosing defines the distribution of tasks among the subnational spheres of government and directly interferes in the provision of specific structure, human resources and specialized technical knowledge in municipalities

and states. It is worth highlighting that the need to increase the team is a factor that discourages the assumption of an expanded set of Health Surveillance actions, in view of staff expenses brackets under the Fiscal Responsibility Law<sup>19</sup>.

Although Brazilian municipalities have received federal resources to carry out the minimum set of Health Surveillance actions, expressed per capita of R\$ 0.25 per inhabitant per year since 1998<sup>18</sup>, set forth in the variable portion of Primary Care (PAB) Minimum Level, their adherence to the implementation of – mainly strategic – health risk management actions has always been incipient.

While the third result indicates a mean proportional growth of municipalities that agreed to receive the minimum strategic level, which in 2005 was less than 20% and had a significant increase in the period analyzed, it is necessary to question whether this increase is related to the effective realization of strategic Health Surveillance actions, or whether it is the result of the different strategies adopted by the states, which are not necessarily related to financial onlending.

At the beginning of the analyzed period, receipt of strategic resources for Health Surveillance for the municipalities was linked to the agreement of expanded health risk management actions. As of 2007, states started to define criteria for the agreement, not always linked to the effective assumption and diversification of risk management actions, through a pact in the Bipartite Interagency Commissions (CIB). The results obtained in the study indicate that the lack of a uniform nationwide criterion – in the agreement and its monitoring – influenced the proportion of municipalities in agreement and directly affected the mean per capita onlending of the strategic resources transferred to each state territory. Thus, it is possible for State Health Surveillance Systems to coexist in different stages of maturity and responsibility assumption in the implementation of actions, which may favor a systemic failure, since a territorially comprehensive cooperative action is often desired for health risk management<sup>2</sup>. In addition, an adequate distribution of tasks should be encouraged within State Health Surveillance Systems that is consistent with the onlending and fosters municipal Health Surveillance actions, and it is expected that the greater the set of actions taken by the municipalities, the greater the volume of resources allocated to them.

With regard to onlendings for Management and training and LACENs, no homogeneous pol-

icy was identified in the analyzed period. In addition to the logic of onlending based on a classification by categories defined by size, type and volume of actions, the possibility of per capita transfers to LACENs could be considered, which would be justified by increased resident population indirectly representing laboratory demand.

Onlendings for Management and training of people started in 2008 and are the lowest values. Their origin seems to be the existence of resources programmed and not effectively transferred because of municipal non-adherence to the agreement of strategic resources. In addition to greater clarity in the distribution of these resources, it should be emphasized that they contribute to an erratic behavior of the mean per capita values.

Federal funding assumes a central position for the construction of the SNVS by favoring decentralized actions, which may encourage greater allocation of resources by other federated entities and explain the distribution of tasks. However, while at the federal level tasks are relatively well defined, the discussion about the type of division of actions in the state Health Surveillance systems is still latent. There does not seem to be a national consensus regarding the decentralization required for Health Surveillance actions or a clear stance of the federal agency, the SNVS coordinator, regarding the design of state systems.

The current federal funding model must be refined for at least two reasons.

Firstly, it restricts the possibility of reducing inequalities in the provision of Health Surveillance actions, which are constitutionally attributed to the SUS and integrate the right to health. Secondly, to stimulate the improvement of the quality of Health Surveillance actions carried out by the services of the three spheres of government and in the SNVS construction process, considering the structural and functional heterogeneity of Brazilian municipalities and their different capacity to finance and manage public goods and services.

It is important to emphasize that the search for equity is a permanent process of successive approximations<sup>20</sup> and that no system would have an absolute and ubiquitous capacity to cover the immense variety of unique situations in defining general rules and values, and would always require a space of autonomy for its operators to mitigate or even modify what is provided in the generic determinations. Notwithstanding this, onlendings may not be susceptible to opportunistic political criteria that occasionally benefit

entities or regions, and must be proportional to the population and the type and quantity of actions to be developed.

Thus, it is also necessary to look at expenditure – treating differently the ones who spend the best, those who do not spend or spend poorly the limited funds transferred – so that SNVS can be built throughout the national territory, not necessarily in all municipalities, which is articulated with the health care networks for the qualification of the care provided to citizens.

### Final considerations

This text showed the analysis of federal funding of Health Surveillance actions from 2005 to 2012, which is in itself relevant and unprecedented. Regarding Health Surveillance, we sought to shed light on the scheduled onlendings to state and municipal services and to question their distribution, despite the scarce available literature.

The federal funds distribution policy showed a nominal increase of onlendings, with a tendency to maintain the adjusted per capita values, stable at around the mean value of R\$ 1.25/inhab/year, with large variations between national regions and state territories. The important increase in the five regions of the country of the mean proportion of municipalities that agreed to carry out strategic Health Surveillance actions throughout the analyzed period is a fact not yet sufficiently analyzed, especially as to the agreement resulting in the effective decentralized implementation of health risk control actions.

The structure of scheduled onlendings by type and purpose for Municipalities and States was explained, with a stable trend in percentages of intended federal onlendings (R\$/year) for Health Surveillance at around 50% to municipalities, 25% to state entities, 20% to LACENs and 5% to Management, HR and others.

The distributive criteria adopted in the federal funding policy of Health Surveillance, based on unified nationwide per capita values, coupled with the introduction of specific onlendings, have produced distortions between state territories, which indicates inequity. The discussion of these results in relation to the conceptual apparatus indicated in the literature points to the need to clarify the concept of equity in funding within the national Health Surveillance system and further discuss the allocation criteria currently used.

Future studies could produce knowledge to achieve greater equity in the allocation of feder-

al resources, improve the current funding model and subsidize the construction of a funding more coherent with the needs of carrying out surveillance actions, discuss the adequacy of resources for the realization of Health Surveillance actions in the country, incorporating the analysis of solidary financial contributions made by the subnational entities and whether they are proportional to the values received from the federal entity, thus enabling the improvement of the quality of service actions and health risks reduction, given the scarce resources available to SNVS, unequal to realities and large needs.

### **Collaborations**

M Battesini worked on the design, outline, data review and interpretation and paper writing. CLT Andrade worked on data review. MH De Seta worked on the design, outline, data review and interpretation and paper writing.

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## References

1. Lucena RB. A descentralização na vigilância sanitária: trajetória e descompasso. *Rev Adm Publica* 2015; 49(5):1107-1120.
2. De Seta MH, Dain S. Construção do Sistema Brasileiro de Vigilância Sanitária: argumentos para debate. *Cien Saude Colet* 2010; 15(3):3307-3317.
3. Soares A, Santos NR. Funding of the Unified Health System in FHC, Lula and Dilma government. *Saúde debate* 2014; 38(100):18-25.
4. Costa RRO, Bosco Filho J, Medeiros SM. Perfil das publicações de vigilância sanitária em periódicos nacionais indexados na scielo. *Vigil sanit debate* 2014; 2(1):22-26.
5. Vazquez DA. Efeitos da regulação federal sobre o financiamento da saúde. *Cad Saude Publica* 2011; 27(6):1201-1212.
6. Simão JB, Orellano VIF. Um estudo sobre a distribuição das transferências para o setor de saúde no Brasil. *Estud Econ* 2015; 45(1):33-63.
7. Piola SF, França JRM, Nunes A. Os efeitos da Emenda Constitucional 29 na alocação regional dos gastos públicos no Sistema Único de Saúde no Brasil. *Cien Saude Colet* 2016; 21(2):411-421.
8. World Health Organization (WHO). *Health systems*. [acessado 2016 out 7]. Disponível em: <http://www.who.int/healthsystems/topics/equity/em/>
9. Whitehead M. *The concepts and principles of equity and health*. Copenhagen: WHO Regional Office for Europe; 2000. Discussion paper. EUR/ICP/RPD 414 - 7734r.
10. Chang WC. The meaning and goals of equity in health. *J Epidemiol Community Health* 2002; 56(7):488-491.
11. Patton MQ. *Qualitative Research & Evaluations Methods*. 3ª ed. Thousand Oaks: Sage; 2002.
12. Santos AR. *Metodologia Científica: a construção do conhecimento*. 7ª ed. Rio de Janeiro: Lamparina; 2007.
13. Gil AC. *Métodos e técnicas de pesquisa social*. São Paulo: Atlas; 2008.
14. Brasil. Portaria nº 2.473, de 29 de dezembro de 2003. Estabelece as normas para a programação pactuada das ações de vigilância sanitária no âmbito do Sistema Único de Saúde SUS, fixa a sistemática de financiamento e dá outras providências. *Diário Oficial da União* 2004; 2 jan.
15. Brasil. Lei Complementar nº 141, de 13 de janeiro de 2012. Regulamenta o § 3º do art. 198 da Constituição Federal para dispor sobre os valores mínimos a serem aplicados anualmente pela União, Estados, Distrito Federal e Municípios em ações e serviços públicos de saúde; estabelece os critérios de rateio dos recursos de transferências para a saúde e as normas de fiscalização, avaliação e gerenciamento das despesas com saúde nas 3 (três) esferas de governo; revoga dispositivos das Leis nos 8.080, de 19 de setembro de 1990, e 8.689, de 27 de julho de 1993; e dá outras providências. *Diário Oficial da União* 2012; 14 jan.
16. Brasil. Portaria nº. 145, de 31 de janeiro de 2001. Regulamenta as transferências fundo a fundo para o financiamento das ações de média e alta complexidade executadas pelos estados, municípios e distrito federal, na área de vigilância sanitária. *Diário Oficial da União* 2001; 8 fev (republicação).
17. Brasil. Portaria nº. 1.998, de 21 de agosto de 2007. Regulamenta o repasse de recursos financeiros destinados à execução das ações de vigilância sanitária na forma do Componente de Vigilância Sanitária do Bloco de Financiamento de Vigilância em Saúde. *Diário Oficial da União* 2007; 22 ago.
18. De Seta MH. *A construção do Sistema Nacional de Vigilância Sanitária: uma análise das relações intergovernamentais na perspectiva do federalismo* [tese]. Rio de Janeiro: Universidade do Estado do Rio de Janeiro; 2007.
19. Brasil. Lei Complementar nº 101, de 4 de maio de 2000. Estabelece normas de finanças públicas voltadas para a responsabilidade na gestão fiscal e dá outras providências. *Diário Oficial da União* 2000; 5 maio.
20. Campos GW. Reflexões Temáticas sobre Equidade e Saúde: o caso do SUS. *Saude Soc* 2006; 15(2):23.

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