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Expanding family and community medicine residency vacancies by municipalities and the More Doctors Program

Moysés Martins Tosta Storti[a]

Felipe Proenço de Oliveira[b]

Aline Lima Xavier[c]

(a) Psicólogo, Prefeitura Municipal de Três Lagoas. Avenida Capitão Olyntho Mancini, 667. Centro. Três Lagoas, MS, Brasil. 79601-905. moysesmts@hotmail.com
(b) Departamento de Promoção da Saúde, Centro de Ciências Médicas, Universidade Federal da Paraíba. João Pessoa, PB, Brasil. proenco@ccm.ufpb.br
(c) Enfermeira, Prefeitura Municipal de Sapucaia do Sul, Sapucaia do Sul, RS, Brasil. alinelimaxavier@gmail.com

The aim of this study was to identify strategies to create or expand vacancies in six family and community medicine residency programs coordinated by municipal managers in the Brazilian National Health System (SUS). The aim of these strategies is to contribute to the universalization of medical residency vacancies and the long-term supply of physicians foreseen by the More Doctors Program. The researchers analyzed reports, legislation, publications, and records of workshops promoted by the Ministry of Health. The following strategies were identified: expanding coverage and improving infrastructure at the primary care level; qualifying and recognizing the importance of preceptorship; planning legislation and budgets; integration with undergraduate programs and residencies in other areas. The protagonist role of municipal managers in transforming medical education is favored by innovative national policies coupled with initiatives adapted to the reality of each municipality.

Keywords: More Doctors Program. Medical residency. Family and Community Medicine. Primary Health Care.

Introduction

After the implementation of the Brazilian National Health System (SUS), primary health care achieved important progress in the country, improving access to health care, outcomes, and indicators, especially after the establishment of inter-federative agreements and new organizational arrangements such as the Family Health Strategy. In this context, the strong expansion in the number of family health teams and their coverage of the population is evident. However, there are still challenges such as inadequate infrastructure of primary care units, insufficient municipal administrative capacity and funding, and high professional turnover rates[1]. This level of care has been elevated as a priority by the federal government, which has mobilized efforts by the Ministry of Health, to propose intervention strategies for these challenges. These efforts include the publication of the National Primary Care Policy (PNAB). Another program involves the implementation of the Primary Care Professional Valorization Program (Provab), which assists professionals in remote areas through supervision and specialized capacity-building programs. Yet another strategy is offering medical residency scholarships through the Support Program for Training Specialized Physicians in Strategic Areas (Pró-Residência), among others[2].

According to Pinto et al.[3], "the insufficient and poor distribution of physicians across the country has long been perceived by managers, scholars, workers, and users." Different studies have demonstrated that, according to the population, the most important measure to be taken to improve SUS care provision is to increase the number of physicians[4]; the proportion of such professionals per inhabitant is lower than the population need, they are poorly distributed across national territory, and they are scarce in the most remote areas and those with lower-income populations[5]. Furthermore, the number of vacancies available in undergraduate programs is proportionally small and poorly distributed[6,7].

These data are directly related to the still-existing difficulties of expanding the Family Health Strategy, in which physicians are part of multiprofessional teams. In 2013, the National Front of Mayors organized the campaign "Where's the Doctor?", requesting that the federal government take measures to solve the problem. Together, these

elements influenced the government's position on the issue, which became an object of effective state action, leading to the creation of the More Doctors Program (MDP)[3] in that same year. The goal of this initiative was to decrease the scarcity of physicians by intervening at three levels: emergency provision of professionals to municipalities with areas of vulnerability; improving the infrastructure for primary care units; and changing medical education by reorganizing the supply of medical undergraduate and residency vacancies and adopting new undergraduate curricular parameters, among other actions[2].

Some analyses of the impacts of the MDP up to the present have shown a reduction in health inequities, higher user satisfaction with the medical care provided by the Program, and greater insertion of students in primary health care during their undergraduate education[7–10]. At the same time, these analyses have also indicated limitations such as: the temporary nature of the program and the expansion of private medical undergraduate programs; insufficiencies in the services' municipal management; little progress regarding the definition of professional careers; and high professional turnover caused by precarious employment relationships[11].

More Doctors Program and medical residency in primary care

Law no. 12.871/2013, which instituted the More Doctors Program, addresses new parameters for medical education at the undergraduate and graduate levels, especially in its relationship with primary health care[2].

The debate about the need to change medical education is not a new one, especially with regard to the need of addressing the actual health needs of the population. However, to consolidate this shift, it must be linked to a deep review of medical residency programs[13,14]. According to Law no. 6.932/1981:

> Medical residency is a modality of graduate-level education aimed at physicians, in the form of specialization courses, characterized by on-the-job training, functioning under the responsibility of health institutions, whether linked to

> universities or not, under the guidance of medical professionals with high ethical and professional qualifications.[15]

Amoretti[16] shines a light on the context of medical residency: The characteristics of the hospital-centered model of medical care and the fragmentation of specialties in medical education produce hospitals as the main field of on-the-job training. The expansion of medical residencies took place because of a need for medical services for hospital practices; vacancies were defined according to the needs or desires of specialties. Specialties began organizing both schools and services, training a high number of professionals for specific activities in a geographically restricted labor market.

Thus, there is a pressing need for the state to regulate the supply of medical residency vacancies[13,17]. This prerogative appears legally through Presidential Decree no. 7.562/2011, which determines that the regulation of institutions and medical residencies must consider the need for specialized physicians according to the socioepidemiological profile of the population, in accordance with SUS principles and guidelines.

Pró-Residência was created in 2009, with the goal of supporting the training of medical experts in priority regions and specialties for the SUS. According to Alessio[18], "Until then, there were no policies encouraging the creation of vacancies for specialist training, guided towards the needs of the SUS, although it is well known that the government is the main funding agent of residency scholarships for students." Family and community medicine is among the priority specialties and practice areas for expansion in the program.

Family and Community Medicine residency programs (FCMRPs) date back 1976, with the first experiments in the field. The family and community medicine specialty establishes a broad foundation in general, family and community medicine to support health systems[16]. Family physicians practice wide-ranging care, which addresses the health-illness binomial as a process conditioned by the interweaving of biological, psychological, and social phenomena of all population groups. Furthermore, this type of care can solve 85% of health problems without severing bonds with patients and, in more critical cases, exercise clinical management throughout the network, considering both the

global health condition and context of users[19,20]. These attributes converge with the competencies expected of physicians trained in this specialty according to the minimum requirements regulated by the resolution set forth by the National Medical Residency Committee[21].

According to Santos[20], "Health systems of countries that are mostly public and show strong investment in primary health care have 30% to 40% of their experts trained in family and community medicine." Alessio points to some challenges to the consolidation of residencies in this specialty, with data from 2014:

> In 2013, there were approximately 34,000 FHS centers implemented in the country, but only 3,253 physicians specialized in FCM. Currently, there are 1,277 FCM vacancies distributed throughout the country's regions, but in some states, such as Amapá, Piauí and Rondônia, they are still absent. Even though vacancies in this specialty doubled between 2009 and 2014, the occupancy rate of such vacancies is extremely low, with an idleness rate of approximately 70%.[18]

Therefore, the author suggests that the More Doctors Program should enable joint action of public policies for investment in medical education according to social responsibility, focused on primary health care and in amounts adequate for the SUS care model. Public policies have stood out as positive factors favoring the filling of vacancies.

Among the main changes in medical education, More Doctors proposes the universalization of vacancies in FCMRPs by 2018, giving priority to the expansion of vacancies, which will become a prerequisite for most other specialties[2,12]. According to data presented by the Ministry of Health, 18,419 students were admitted into medical undergraduate programs in 2012. In 2015, there were 1,533 FCMRP vacancies and 365 vacancies for other direct-access specialty programs. Thus, by 2018, 16,500 vacancies in this specialty would need to be created to ensure universal access to medical residency in Brazil.

According to the Ministry, because of the universalization of medical residency based on FCM, Brazil is similar to most countries with public health systems. The program

also enables the long-term provision of qualified physicians to work within the scope of primary care[2,7,23].

The institutional mobilization carried out by stakeholders such as the Ministry of Health and the Ministry of Education to consolidate medical residencies, especially those in the field of family and community medicine, can reinforce the training of experts in priority areas according to Brazil's health needs. This movement is coupled with co-accountability measures for municipal managers in strategies to supply and retain primary health care physicians through the More Doctors Program.

The aim of this study was to identify the strategies to create or expand vacancies in six Family and Community Medicine residency programs promoted by municipal managers that can contribute to the universalization of medical residency vacancies and the long-term supply of physicians as proposed by the More Doctors Program.

Methodology

This was a qualitative exploratory study with the aim of providing an overview of a given phenomena in its historicity, especially because it is a little-explored theme in need of definition and clarification. This can contribute to the first stage of a broader investigation and the formulation of more precise research problems[24].

In 2015, the Ministry of Health conducted two discussion workshops with representatives from ten FCMRPs from every region of the country. These programs were invited, among other reasons, because of their success in expanding or filling their vacancies. The goals of these workshops were: to present information about the More Doctors Program, especially regarding the expansion of medical residencies; to discuss the challenges and potentials for the implementation of FCMRPs, according to the perception of the managers and coordinators of these programs; and to establish a joint agenda between the Ministry of Health, the FCMRPs, and other partners, to collaborate on the expansion of national vacancies.

Of the workshop participants, six programs were selected as objects of the present study. The inclusion criterion was the implementation of a medical residency

committee by the municipal SUS manager. This criterion considered the the Ministry of Health strategy that gives priority to encouraging the creation of municipal FCMRPs. Programs of the following municipalities were analyzed: Curitiba (Paraná), Florianópolis (Santa Catarina), Palmas (Tocantins), Recife (Pernambuco), Rio de Janeiro (Rio de Janeiro), and São Bernardo do Campo (São Paulo).

Data collection took place based on participative observation in the workshops and a field diary. The goal was to record information about the creation, organization and management strategies of these programs, their strong points and challenges, and the opinion of their representatives with regard to the success of their activities.

Documentary research was also used. Gil[24] defined this as research developed based on already existing material, which provides researchers with the benefit of broad coverage of spatially dispersed phenomena and data. According to this author, this tecnique consists of the exploration of documentary sources that may have been analyzed before, but that can nonetheless be analyzed again according to new research objectives.

The researchers analyzed the reports of the two workshops mentioned above[25,26]; their respective field diaries; a technical report on studies about FCMRP funding and conformation models carried out by the Ministry of Health in 2014[27]; and four interviews published in the Journal of the Brazilian Society of Family and Community Medicine between 2013 and 2015 with health managers involved in the FCMRPs of the municipalities of Curitiba, Florianópolis, and Rio de Janeiro[28–31]. Data collected from the National Medical Residency Committee System (SisCNRM) and legislation specific to the selected municipalities, as well as through direct contact with the coordinators of these programs were also analyzed.

Data analysis was conducted according to the framework proposed by Gil[24] for Bardin's content analysis. First, the researchers conducted a reading of the material and then selected and prepared it for thematic analysis according to the objectives of the study. This was followed by an exploration of the material, selecting and classifying relevant data. The last step consisted of data processing, inference, and interpretation to construct broader and more generalized forms of understanding.

Limitations of the adopted research techniques include the impossibility of addressing specificities of the practical experiences of the studied programs and updating the data in the systems used. Through data analysis, the general and abstract FCMRP was explored with the goal of identifying links between the development of local and national policies to support the expansion of FCMRP vacancies by municipal managers.

The data used in this study were extracted from government sources and/or scientific publications, in accordance with the required ethical aspects of documentary research. The health system managers of the selected municipalities were officially informed about the study and were invited to participate according to the partnerhsip established with the Ministry of Health. The study did not involve experiments with human subjects, abiding by the guidelines set forth in Resolution CNS no. 466/2012 of the Brazilian National Health Council.

Results and Discussion

The results and discussion are presented as follows. First, an overview of the expansion and filling of vacancies in the studied FCMRPs is presented. Next, the paper presents the strategies identified through data analysis: 1) Expansion of coverage and improving the infrastructure of primary care; 2) qualification and valorization of preceptorship; 3) planning legislation and budgets; and 4) integration with undergraduate medical programs and residencies in other fields.

Table 1. Total number of 1st year residency vacancies (R1), Filling and Dropout rates, per year, of FCMRPs.

	Vacancies (R1)			Filling rate		Dropout rate	
	2012	2014	2016*	2014	2015	2014**	2015**
Curitiba/Paraná	-	20	50	11 - 55%	5 - 25%	3 - 27%	1 - 20%
Florianópolis/Santa Catarina	-	16	16	13 - 81%	16 - 100%	5 - 31%	3 - 18%

Palmas/Tocantins	–	20	20	14 – 70%	14 – 70%	3 – 21%	6 – 42%
Recife/Pernambuco	–	6	60	3 – 50%	6 – 100%	0	2 – 33%
Rio de Janeiro/Rio de Janeiro	60	100	150	64 – 64%	100 – 100%	20 – 31%	20*** – 20%
São Bernardo do Campo/São Paulo	–	10	10	5 – 50%	6 – 60%	2 – 40%	0

Sources: FCMRP coordinators, SisCNRM, on November 15, 2015, DEPREPS/SGTES/MS, 2014. **subject to approval by CNRM **in the first six months *** in November 2015*

Table 1 presents the number of FCMRP vacancies, in addition to filling and dropout rates; the data was extracted from the SisCNRM and the coordinators of the programs. The two main challenges to training physicians specialized in family and community medicine and the supply of such professionals were filling the available vacancies and retaining resident physicians in the programs[20,32]. Filled vacancies in 2015 in all the studied municipalities were greater than or equal to 50%, above the 26.5% national occupancy rate in the same year[32]. In 2016, only Curitiba presented an occupancy rate below 50%.

According to Feuerwerker[13], unfilled vacancies are a result of incentives that value other specialties and also a consequence of institutions, considering the historical importance of practice and the increasing specialization of medical education. However, some elements favor filling of vacancies, such as: investment in primary care equipment and environment; job, career and wage plans; and the valorization of family and community physician training in Family Health Strategy work[22].

Furthermore, recent national proposals to increase filling rates include increasing the supply and amount of scholarships and providing incentives for training in preceptorship. Another recent incentive is awarding a 10% score increase in admissions examinations to medical residencies in other direct-access programs to individuals who have completed family and community care residencies.

The More Doctors Program opened space on the political agenda for the importance of FCMRPs in supplying qualified primary health care physicians in areas of social vulnerability. This emergency provision helped enhance medical care, but measures for long-term provision are still needed to address the shortage of physicians. The idea is to retain physicians in the same locations as their residencies; thus, expanding these programs can contribute to distributing and supplying physicians where needed. However, initiatives at the municipal level regarding medical residency programs are essential to overcome this challenge[23,25,26].

The topics below present the strategies adopted by the studied FCMRPs to expand and fill vacancies. Furthermore, they present an analysis of the implications of these programs at the local level of municipal health systems, making a connection with national policies for education in health.

Expanding coverage and improving primary care infrastructure

The studied municipalities developed actions to expand primary health care coverage, especially through the Family Health Strategy. They also indicated the need to analyze the conditions for the infrastructure of primary care units.

The municipality of Rio de Janeiro has publicized an important investment in primary health care, restructuring the service around the Family Health Strategy, influenced by both PNAB and international experiences that have proved the effectiveness of these services as the basis for developing universal healthcare systems[30,33]. According to data from the Department of Primary Health Care of the Ministry of Health[34], this municipality went from approximately 9% of the population being covered by the Family Health Strategy in 2010, to 45.4% in 2015. Curitiba also showed expansion through the Family Health Strategy[20], reaching a coverage of 45.82%.

Population coverage by the Family Health Strategy in São Bernardo do Campo also increased: from 18.51% in 2010 to 58.77% in 2015. The municipalities of Palmas and Florianópolis presented elevated and record coverage, with an approximate increase of 10% and 15%, respectively, between 2010 and 2015. In turn, Recife maintained its rate at

approximately 50% in the same period. Even Florianópolis, which reached total population coverage according to current PNAB criteria, still has room to grow in the Family Health Strategy[29].

A factor that limited expansion to only 1.5% per year at the national level was the difficulty of municipal managers in attracting and retaining physicians in family health teams[2,5]. Medical residencies are one way of engaging physicians who will be inserted in primary care units, especially recent graduates. These findings highlight the challenges of creating and filling vacancies in more isolated areas, as already mentioned[18,32].

FCMRPs were one possibility for reducing the shortage of physicians and increasing their qualification to work with the Family Health Strategy[33]. Thus, expanding primary health care opened a window of opportunity to create municipally managed residency programs, addressing the demand for incorporating and qualifying physicians, in addition to improving the infrastructure required to organize such residency programs.

Undertakings of this nature were also carried out by the municipality of Rio de Janeiro, such as the implementation of family clinics, the incorporation and restructuring of services, and the provision of educational technological resources[30–33]. Florianópolis and São Bernardo do Campo addressed challenges regarding the creation of necessary space within services, while also retaining qualified and preceptor professionals in services with FCMRPs[29]. However, these points still proved to be a challenge in already existing initiatives in all municipalities.

Qualification and valorization of preceptorship

The SisCNRM presented data on the number of preceptors at the beginning of the accreditation process and the availability of new vacancies in medical residency programs. Preceptorship is an essential element of the pedagogical project in medical programs. The ratio of preceptors to residents is defined through a CNRM resolution, which lists the minimum requisites for accreditation as “a minimum proportion of one full-time physician member of the clinical staff to six residents, or two part-time physician members of the clinical staff to three resident physicians”[35].

Among the studied programs, three presented a proportion of one preceptor to one resident (Curitiba, Florianópolis, and São Bernardo do Campo), while the proportion of 1:2 was found in Palmas and Recife and, 1:4 in the municipality of Rio de Janeiro.

Training tutors and preceptors for FCMRPs also represents a challenge, as these professionals serve as models and are responsible for forming the character of students and residents. Thus, constructing identity and forming preceptors includes reflecting about the different models of care and teaching that exist in routine healthcare work, valorizing preceptorship, defining a competency profile that links management, care, and education; and providing training that corresponds to the needs of a given area, considering both professor knowledge/practice and professional knowledge/practice[,36].

Another highlight was the supply of refresher and specialization courses promoted by institutes of excellence in the field of health in partnership with the Ministry of Health since 2012; in addition to the recent implementation of the National Preceptor Training Plan, whose objective is to subsidize and ensure instruments for the expansion process of residency vacancies in family and community medicine. Furthermore, five of the six FCMRPs in the studied municipalities admitted preceptors-in-training to these programs in 2016[37] (except for São Bernardo do Campo, even though it had preceptors in previous years).

FCMRP coordinators highlighted the positive value of qualified preceptors for the satisfaction of physicians-in-training and, consequently, their permanence in the program. Preceptor training programs were considered important not only to qualify such professionals, but also to create and organize the actual FCMRP. However, the analyzed data did not allow for correlation between such initiatives and rates for filling of vacancies or dropouts.

One characteristic noted by the FCMRP manager of Florianópolis was the potential presented by the high number of physicians specialized in family and community medicine working in the municipality's primary health care system for enabling progress. This was especially true in terms of the model of resident insertion in teams and the participation of preceptors in the development of residency activities[29].

In addition to financial incentives for recruitment, other forms of valorization of these professionals were also found: recognition of work hours spent in educational activities, considered as regular work hours and part of the record of professional production; involvement in teaching and research initiation and activities; capacity-building in the pedagogical and medical education field; recognition of this function in career, job, and wage plans; and priority in issues related to personnel management in the service network.

Planning legislation and budgets

Some organizational arrangements related to legal and financial planning were identified and are presented in Table 2.

Table 2. Complementing residency scholarships, incentives for preceptors, legal mechanisms used and financial sustainability of FCMRPs.

	Complementing residency scholarship	Incentives for preceptors	Legal mechanisms	Financial sustainability
Curitiba (Paraná)	No	No	-	No
Florianópolis (Santa Catarina)	Yes	Yes	Law no. 9.649, October 1, 2014	Yes
Palmas (Tocantins)	Yes	Yes	Law no. 2.010, December 12, 2013	Yes
Recife (Pernambuco)	No	No	-	No
Rio de Janeiro (Rio de Janeiro)	Yes	Yes	Agreement that regulates actions with social organizations	No

São Bernardo do Campo (São Paulo)	Yes	Yes	Law no. 6.368, December 4, 2014, altered by Law no. 6.406, June 25, 2015; Joint Ordinance SBC/Fundação ABC, December 10, 2010	No

Source: Department of Planning and Regulation of Health Professional Provision, 2014[27]

The FCMRPs of Florianópolis, Palmas, Rio de Janeiro and São Bernardo do Campo used two mechanisms to encourage filling vacancies and resident retention. The first was offering financial complementation of resident scholarships, and the second, paying a bonus to professionals who worked in the health network of these municipalities and performed supervisory/preceptorship activities with health students.

Regarding the planning and execution of these investments, the studied municipalities presented heterogeneous results. In Rio de Janeiro, administrative actions were conducted through contracts with the Social Organization for Health, in the case of residents, and an agreement with the University Foundation, which managed the payment of preceptors. Florianópolis and São Bernardo do Campo adopted specific legislation for the awarding of scholarships and bonuses.

Another mechanism used to transfer financial resources was the insertion of residents and/or preceptors in programs that incentivized the teaching-service integration implemented in the municipality, as is the case in Palmas and São Bernardo do Campo. The goals of these programs were: to incentivize training processes according to the needs of the municipal health system; to qualify the workforce in health work by reflecting about the work process; to encourage changes in professional education developed by higher education institutions and scientific research, directing them at the SUS context; and to retain specialized professionals in these municipalities.

Thus, financial investment in the form of scholarships for healthcare, academic, and research activities of resident physicians and paying bonuses to professionals who

perform preceptorship and supervision activities in health units were important protagonist actions of municipalities. The only municipalities that did not complement residency scholarships, as shown in Table 2, were Curitiba and Recife, although they reported offering financial complementation to residents who already had an employment relationship with the municipality. Thus, the analyzed programs presented significant filling rates, while also employing financial incentives for residents and/or preceptors, suggesting a correlation between this incentive and filled vacancies.

In recent years, the complementation strategy has been coupled with funding provided by national policies toward the creation of new family health teams, including increases in the financial resources foreseen for primary health care, and training specialized physicians in priority areas for the qualification of healthcare networks. Together, such investments provide an initial assessment of the financial sustainability of FCMRPs, i.e., the ability to gather their own resources or those transferred from other entities to ensure a positive budget to maintain residents and, consequently, invest in the expansion of vacancies[27].

Integration with undergraduate medical programs and residencies in other fields

In the analyzed documents, strategies to integrate residency programs with undergraduate programs were indicated as important factors in attracting physicians to family and community medicine. A good initial experience with primary health care, especially in health units that were well-assessed in their formative processes and monitored by preceptors trained in family and community medicine, were indicated as success strategies that favor filling vacancies. Initiatives of this type included policies for teaching-service integration and on-the-job training, such as PRÓ-SAÚDE and PET-SAÚDE. Other initiatives were integration activities between residents and undergraduate students, in addition to publicizing family and community medicine to alumni and students in the last years of undergraduate programs.

This strategy becomes even more important in a context in which primary health care is growing as a field for undergraduate internships. It helps medical students

perceive the profession in relation to their personal interests, being influenced by such communication. Students are also able to have their first experiences and perspectives on working in the labor market[31].

Some of the studied programs also presented mechanisms to work together with other FMCRPs and multiprofessional residencies in health. This was carried out joint selection processes and pedagogical proposals, which included theoretical and practical activities such as classes, seminars, and regular meetings. The partnership between the secretariats of health and institutions of higher education, especially in terms of the support provided by schools of public health to create and develop FCMRPs, was indicated by managers as an important step towards creating and implementing actions to coordinate activities between residents and undergraduate students.

Final considerations

The present study showed that municipal health managers took on an essential protagonist role in the expansion of training in family and community medicine. In the analyzed programs, primary health care coverage increased and the infrastructure of primary care unit improved, strategies that helped strengthen FCMRPs. Residency programs with high filling rates stood out for their use of preceptorship qualification and valorization, which was implemented through partnerships with federal initiatives that granted scholarships and bonuses.

Program managers carried out actions that involved working together with medical undergraduate programs. They also conducted other initiatives that strengthened the integration of health education and services within healthcare networks. They presented this strategy as one of the strong points behind the success of their FCMRPs. Finally, the possibility of intervening in legal and budgetary aspects, using legal mechanisms specific to medical residency programs and available budgets for training professionals in health networks, represented an important factor in ensuring the continuity and sustainability of the analyzed programs.

The combination of municipal initiatives with federal policies regarding work management and education in health and the expansion of primary health care have resulted in a unique moment for residencies in family and community medicine. This is especially true considering Law 12.871, which posits these residencies as the desirable path toward the solid education of physicians specialized in primary health care. This places Brazil among other countries that have understood that regulating the education of human resources is a sensitive theme for those who defend universal health systems.

Lastly, the authors reiterate that due to its objectives, this study was limited to the investigation of FCMRPs that participated in policymaking to expand residency vacancies. Further research should include the experiences of other municipalities and higher education institutions to expand understanding of the diversity of features that contribute to policymaking across the country. For example, more studies are needed to understand the possibilities of expanding FCMRPs in municipalities that do not include major cities.

Family and Community Medicine Residency Programs represent one of the best SUS policies for continuously meeting the demand for qualified physicians, representing an opportunity for municipal health managers to invest in the training of the professionals with sights on long-term supply. Therefore, it is important that further studies be conducted about the practical experiences these programs to identify the changes achieved by the More Doctors Program and the challenges that persist in the context of professional health education and health work in Brazil.

Collaborators

Moysés Martins Tosta Storti, Felipe Proenço de Oliveira, and Aline Lima Xavier contributed to the study design, data collection, processing, analysis, and discussion of data, drafting of the manuscript and critical revision of the manuscript for important intellectual content. All the authors declare that they are responsible for all aspects of this study.

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