

“Mais Médicos”: a Brazilian program in an international perspective

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The shortage of health professionals in remote and vulnerable areas is an important obstacle for universal access to health in several countries. This paper examines the policies of provision of health professionals in Australia, in the United States of America, and in Brazil. In spite of the partial success of previous initiatives, it was only with the “Mais Médicos” (“More Physicians”) Program that the provision of physicians in vulnerable areas had the magnitude and the response in adequate time to respond to the demands of the Brazilian municipalities. Quantitative and qualitative changes in the training of physicians are in course and they seek to assure not only universality, but also integrality and sustainability in the Brazilian National Health System (Sistema Único de Saúde – SUS). The success of these initiatives will depend on the continuity of the intefederative articulation, of State regulation policies, as well as of the continuous monitoring and improvement of the program.

Keywords: “Mais Médicos” – “More Physicians”. Primary Health Care. Brazil. Australia. United States of America.

Introduction

All over the world, health systems have been going through deep changes due to demographic, epidemiologic and economic transitions¹. Over the last few years, the Brazilian government has been developing a series of actions aiming the restructuring of the Brazilian National Health System (SUS) so to prioritize Primary Care and face the development limitations of that which is established as the preferred entryway of SUS. In its 25 year of existence, SUS has made possible an

importante increase in the access of the Brazilian population to healthcare². However, people living in remote and vulnerable communities still face important difficulties in the access to health services.

Geographic inequalities in the distribution of physicians can be found in several countries and regions^{3,4}. The World Health Organization estimates that 50% of the world's population lives in remote rural areas, but these areas are served by less than 25% of the medical workforce⁵. Many countries are seeking solutions to increase the coverage of primary care in vulnerable areas attracting health professionals to these regions^{6,7,8}. These strategies include: regulation policies such as mandatory service; monetary incentives such as scholarships; non-monetary incentives such as the extension of the permanent visa for foreigners^{9,10}. In spite of the importance of human resources for the access to health and of previous policies made the Brazilian Government regarding the inequality of the distribution of physicians and the strengthening of primary care, none of them reached the coverage, magnitude and speed of the "Mais Médicos" Program, including its concern with the need of changes in medical education.

These transformations generated deep discussions both in national and international scopes on the different strategies that seek to increase access to health services in vulnerable areas and to restructure health systems through the strengthening of primary care. In face of the situation, this paper makes a comparative analysis between service organization models of three countries: Australia, United States of America and Brazil. The motivation for opening the present debate refers to the need of the Secretariat of Management of Labor and Education in Health (SGTES) at the moment in which the "Mais Médicos" has completed on year of its implantation, to learn and have a dialog with the countries that present different models of provision and fixation of physicians in distant areas and greater vulnerability regions. Thus, we were inspired by the debate and presentations of "International Seminar of the Education and Work Integration Process and the Impact on Care: the role of permanent training and education in the care network ordained by primary care", promoted by SGTES on September 17th and 18th of 2014 in Brasília. The study was conducted by means of bibliographic research, with academic literature revision in LILACS, MEDLINE and EMBASE, as well as documents, reports and presentations in English, Spanish and Portuguese were analyzed.

Australia

Australia has a mix health system with private and public participation. Founded in 1984, Medicare offers universal health coverage to the Australian population through public funding. Medicare is the main financier of health primary care in Australia¹¹. A third of the Australian population lives in rural zone, of which 20% is dispersed in 1,500 rural communities with under 5,000 inhabitants¹². Many of these communities suffer shortage of physicians, in which the proportion of physicians per 1,000 inhabitants is 1.8 for urban areas, and 0.9 for rural communities¹⁰.

As a strategy to retain and fixate health professionals in remote regions, the Australian Government implemented a series of measures and programs. Among the most relevant programs for this discussion are the Overseas Trained Doctors (OTD) and the Rural Clinical Training and Support (RCTS)¹³. OTD is governed by the "19AB Act" of January 1st 1997, and is a program designed to attract physicians graduated overseas to work in remote areas of Australia. The eligible professionals for the program are: general practitioner physicians, hospital general practitioner physicians and specialist physicians.

The highlight axis refers to general practitioner physicians being coordinated by the Rural Work Agencies (Northeast, New South Wales, Queensland, Victoria, South Australia, West Australia and Tasmania Agencies) and by the Australian Medical Council, along with Human Resource areas of MEDICARE. The necessary requirements for the practice of medicine for foreigners in Australia are: a) approval on the on-line test; b) proof of proficiency in English; c) evaluation of curriculum criteria for acceptance in foreign universities previously approved by MEDICARE; d) individual contract with

an employer; e) obtaining a temporary work visa-457; f) approval in the interview for obtaining the MEDICARE registration; g) payment of fees¹⁴.

The participant initially has restrictions to perform its labor activities, being supervised by other physicians and their license does not allow unrestricted professional practice, so that their placement must be in areas the Australian Government considers being of greater vulnerability for a period of 10 years. During this period it is offered to the participants the possibility of technical improvement by education offers and classes for the complete revalidation of the participant's diploma in the country. The financial benefits vary according to the region chosen by the candidate, so that the benefits are higher in areas of greater need¹⁵.

The program is three years away of turning 20, so it is possible to evaluate that the fixation of participants in Australia is still suffering difficulties to retain the participants in rural settings when the 10 year period of the contract is up. The problem is related to several personal, economical and geographic factors which characterize the vulnerable areas of the country as it occurs in the other countries that have established foreign professional recruitment policies as well¹⁶.

Most of Australian medical schools receive funding from the Government through the Rural Clinical Training and Support (RCTS) program, which foresees funding for strengthening of training of clinicians in rural areas. The funding is directed for medical schools to: select students from rural areas, provide rural apprenticeship and internship for all medicine students and the perfect the support system for rural medicine students and teachers¹⁷. Amongst the goals of the RCTS are: 25% of medicine students to perform at least one year of their clinical training in a rural area and 25% of Commonwealth funded students to come from rural areas. Currently, 90% of Australian medical schools participate in this program. It is important to highlight that the Australian Government has been encouraging students to study in university campi near their original regions¹³.

The United States of America

The American health system is quite different from Brazil and Australia, as there is no public system of universal health coverage. Most of the US citizens are covered by health plans funded by their employers. Individuals over 65 years of age may register in the Medicare Program which is funded by the Government. Low income families, children, pregnant women and handicapped people are eligible for Medicaid, also funded by the Government. The American Government also manages the S-Chip, which provides coverage for children of low income parents, but not sufficiently low to be eligible for Medicaid. Veterans of the Armed Forces also have medical care through Government financing¹⁸.

The Affordable Care Act (Obamacare), approved in March 2010, is considered the greatest change in the US health system since the foundation of Medicaid and Medicare in 1965¹⁹. It is a Federal regulation law which aims to expand the coverage of public and private insurance, control health insurance prices, and assure basic treatments and even hospital admissions for serious diseases to the insured, all of this regardless of sex or, more importantly, of pre-existing conditions. At the individual level, the implementation is guaranteed through the obligation of acquiring health insurance. At state level, the States that join the project receive more federal resources for programs targeted to public health¹⁹.

Unlike Brazil and Australia, medical education in the US is offered at the postgrad level. This means that if a student desires to become a physician he or she must take an undergraduate course completing the prerequisites to access medical school, with an average duration of 4 years. In medical school, the students, now graduate students, spend two years in classroom and laboratories and another two years getting to know the profession up close, in hospitals, before moving forward to medical residence. In total, it takes eight years to train a physician in the US^{20,21}. Most of the institutions that train physicians are private, with high yearly tuitions. A great number of students get loans in order to be able to afford their training, and they usually begin to pay it after graduation.

In this context, it is not difficult to realize that those who study medicine end their studies with a substantial debt. According to the American Association of Medical Colleges, it is estimated that four years of private medical school has an average cost of 278 thousand dollars^{22,23}.

Despite recent initiatives in the US for greater State regulation over the health system, there are only few initiatives to regulate the provision of health professionals in remote and vulnerable regions. The main initiatives to reduce inequalities in the distribution of physicians in the US are made through the National Health Service Corps (NHSC) and the Conrad 30 Program. Since 1972, NHSC offers scholarships and student loan debt payment programs to the professionals willing to render health services of primary health care for communities in need. After graduation (and the residency for physicians, osteopaths and dentistry students), the student must apply for the previously approved vacancies in areas in need²⁴.

The candidate who obtained a scholarship from NHSC and chooses a specialty that is not family and community general practitioner, or who does not fulfill service requirements, shall reimburse the government in three installments with interest. In the student debt payment program, students apply after graduation and the NHSC pays up to US\$60 thousand of the debt every two years. There is also the option to work at a NHSC approved location for 5 years, which offers the student the potential to receive US\$ 170 thousand as student loan payment²⁴. It is important to highlight that the areas with shortage of health professionals are mapped by the regional offices of NHSC.

Through the Conrad 30 Program, the United States Government allows physicians that are in the US with a J-1 visa (for temporary training) to remain in the country after the exchange program is over to act in areas in need²⁵. It is worth mentioning that the individuals who enter the US with a J-1 visa should normally return to their countries of origin and reside there for at least 2 years. Through the Conrad 30 Program, the physician's tie is with a local employer and not the federal government. After the fulfillment of the contract's work conditions for the minimum period of three years, the physicians may apply for an emigrant visa or a permanent residence visa²⁵. Approximately 25% of the physicians in activity in the US are foreigners²⁶.

Brazil

The Brazilian National Health System (SUS) is formed by the set of all health actions and services offered by federal, state and municipality health organs and institutions, being allowed for private sector to participate in this system in a complementary form. SUS was instituted by the 1988 Federal Constitution, which determined health is a right for all and the duty of the State, being one of the largest public health systems in the world.

In spite of SUS having made possible an important increase in access to health care for the Brazilian population, people living in remote and vulnerable communities still face poor access to operative health services. The shortage of physicians has always been an important aggravation to this problem, as it was made clear by the campaign "Where is the physician?" (or "Cadê o médico?", in Portuguese), held by the National Mayors Front (Frente Nacional de Prefeitos), during the meeting of Mayors that took place in Brasília in January 2013²⁷.

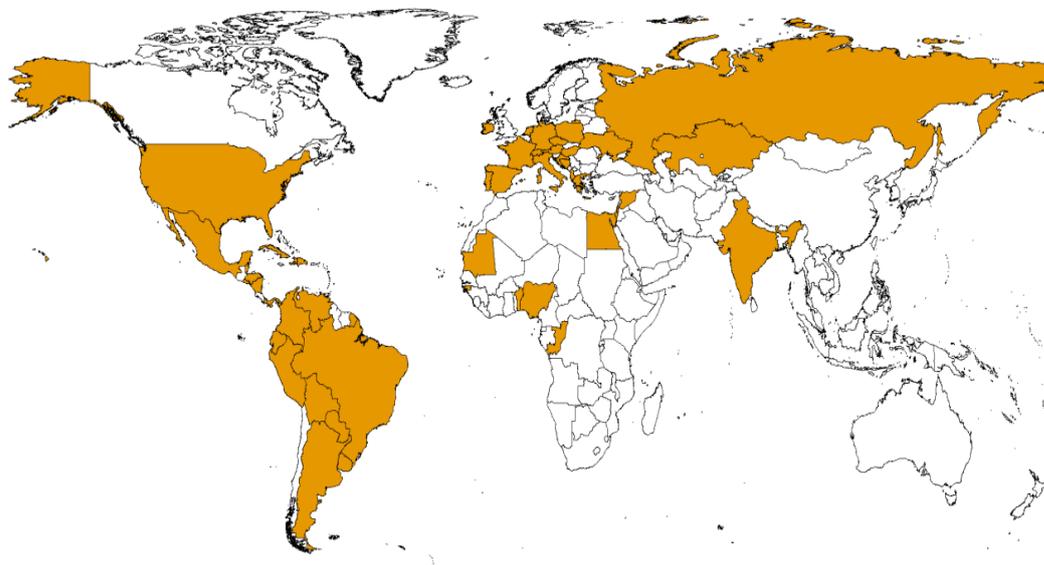
The "Mais Médicos" Program was introduced in Brazil in July 2013, as part of a series of measures to fight inequalities of access to operative primary care²⁸. The Program has been structured on three axis of action. The first one is the investment in improving the health care network infrastructure, particularly in primary care units. The second one is the extension and education reforms of the medical courses and medical residence in the country. The third one, named "*Projeto Mais Médicos para o Brasil*", or "More Physicians for Brazil Project" (PMMB), is an emergency physician provision program for vulnerable areas.

It is important to highlight that in Brazil, before the PMMB, there were several initiatives to attract and fixate health professionals in remote areas, such as the Internalization of Health and

Sanitation Action Program (Programa de Interiorização das Ações de Saúde e Saneamento - PIASS - 1976), the Internalization of the Brazilian National Health System (Programa de Interiorização do Sistema Único de Saúde - PISUS - 1993), the Internalization of the Work in Health Program (Programa de Interiorização do Trabalho em Saúde - PITS - 2001), and recently the Primary Care Professional Appreciation Program (Programa de Valorização dos Profissionais da Atenção Básica - PROVAB)²⁷. Since 2011, PROVAB has been recruiting and allocating physicians, nurses and dentists to work in vulnerable areas. However, as in previous programs, the participation of the physician professional in PROVAB has been below the local or regional needs. Between 2011 and 2013, the participation had an important increase from 350 to 3,550 physicians. It is worth mentioning that by 2013 the hiring was no longer made the municipality, but by the Federal Government, there was an increase of the grant and an extra 10% offer on the grading for the medical residence test²⁹. Besides, in 2013 the primary care specialization started to be mandatory.

In spite of the above-mentioned programs having contributed to attract professionals to remote areas, none was able to get it to the necessary magnitude to supply the municipalities' demands. It was only through PMMB that the recruiting and allocation of physicians had the necessary dimension to fill the municipalities' demands³⁰. In less than a year, PMMB recruited 14,462 physicians and allocated in 3,785 municipalities. The grand innovation of PMMB refers to the strategy of international calls, when besides the 1,846 Brazilian physicians, the program started to count on 12,616 foreign physicians from 49 countries participating in the program, as seen in Picture 1. Out of the foreign physicians that operate in PMMB, 11,429 are Cuban physicians who were recruited through a partnership between the Ministry of Health of Brazil and the Pan-American Health Organization, and the later one with the Ministry of Public Health of Cuba (Ministerio de Salud Pública de Cuba)³¹.

Picture 1. Countries of origin (professional practice) of the participating physicians of the "Mais Médicos Para o Brasil" Program.



Municipalities and indigenous sanitary districts that fitted in one of the six vulnerability profiles (Table 1) were able to participate in the program. As part of the registration process, the managers were required to identify the number of necessary physicians according to a maximum number based on the population of the municipality and for whom they would be capable of providing adequate conditions for the activities. Physicians eligible for participation were: Brazilian

physicians graduated in Brazil or overseas, foreign physicians graduated in Brazil or overseas as long as coming from countries where the per capita number of physicians was over 1.8 per thousand, which corresponds to the per capita number of physicians in Brazil before the PMM³².

Table 1. Profile of the municipalities and locations participating of the “Mais Médicos para o Brasil Project”

Profile of the Municipality

P1 – Areas referring to 40% of the census sectors with greater percentages of extreme poverty population of state capitals, according to IBGE.

P2 – Areas referring to 40% of the census sectors with greater percentages of extreme poverty population of municipalities situated in metropolitan area, according to IBGE.

P3 – Areas referring to 40% of the census sectors with greater percentages of extreme poverty population of municipalities that are among the G100, municipalities with over 80,000 inhabitants, with the lowest public income levels “per capita” and high social vulnerability of its inhabitants.

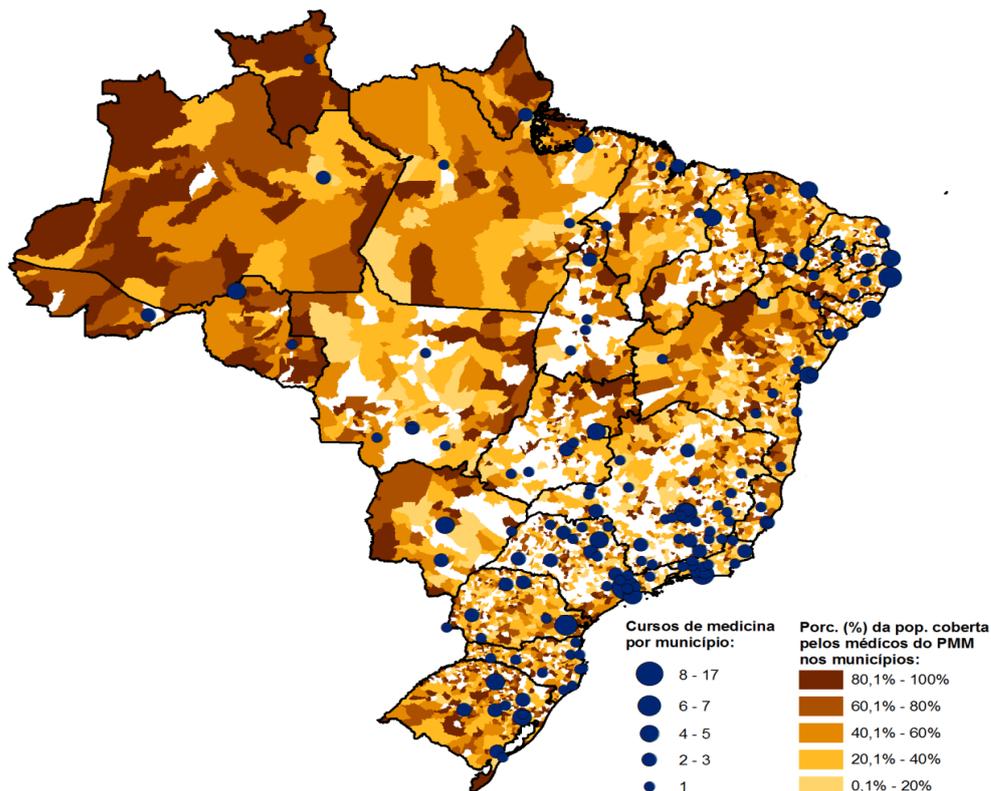
P4 – Municipalities with 20% or over of its population living in extreme poverty, based on data of the Ministry of Social Development and Fight Against Hunger.

P5 – Municipality which is under the area of performance of the Special Aboriginal Sanitary District.

P6 – Areas referring to 40% of the census sectors with greater percentages of extreme poverty population of all other municipalities, according to IBGE.

The allocation criteria included the preferences of registered physicians, the place of graduation, the age of the candidate and if the physician had worked in the “Family Health Strategy” (Estratégia de Saúde da Família), making it impossible for the physicians to stay in the same municipality of the physicians that were already working in primary care. Both physicians and municipal managers had to confirm the results of the allocation. The percentage of population covered by physicians of the PMMB may be observed in Picture 2.

Picture 2. Distribution of the physicians of the “Mais Médicos Para o Brasil” Program and the distribution of the medical colleges in Brazil.



Through joint effort between the Ministry of Health and the Ministry of Education, so that they may begin their activities in Brazil, foreign physicians go through four weeks of intensive training offered by Brazilian universities, which addresses clinical language, the national assistance protocols and SUS³². The approved physicians receive a temporary registration for medical performance named “Unique Record of the Ministry of Health” (Registro Único do Ministério da Saúde - RMS). A special visa named VICAM was created for the physicians participating in the PMMB issued by the Ministry of Foreign Affairs.

The Brazilian universities assure continuous medical supervision for the participants. All participants get a tablet computer used to access extension courses offered by the SUS Open University (UNA-SUS)¹. Physicians participating in the program must dedicate 32 hours a week to clinical activities and 8 hours to theoretical studies, as later they all shall undergo an evaluation. The signed contract has three year duration and may be renovated for additional three years.

Discussion

As we analyze the national and international processes of strengthening Primary Health Care and the provision of medical professionals in vulnerable areas, we should observe that, apart from the differences of context, the problematic has similarities. A recent study by the Organization for Economic Co-operation and Development (OECD) has shown that even with the increase of the total number of physicians, their distribution remains on the trend of great concentration in State capitals and areas of shortage in rural zones. Two other phenomena observed are the feminization and aging of the medical workforce³³.

More and more countries seek measures to assure the universality of health coverage, as well as the strengthening of a health system operative and adequate to the health needs of the

population⁸. The uneven distribution of health professionals, especially physicians, represents an important limitation to reaching these objectives. As observed in the three countries analyzed, the iniquity problem in the distribution of health professionals is quite complex and a series of concomitant strategies has been used in order to mitigate it^{5,34}.

In short term, all three countries have made use of physician recruitment (national and foreign) within models that assure the attraction and retention of these professionals in remote areas. Brazilian and Australian models use a combination of financial and education incentives to attract and retain these professionals. Whereas the United States' model has a greater focus on financial incentives and on the retention of foreign physicians that are already in the country being trained, through the extension of permanence visas. It is important to note that there are important limitations in the comparison of the attraction of a country of average income with one of high income. It is also necessary to elucidate the same limitations regarding the possibility between countries with extremely diverging political propositions towards the public health system.

In Australia, the wages of participant physicians of the Overseas Trained Doctors is variable, so that it is higher for those performing in remote rural zones. In Brazil, the wages of the participants of PMMB is the same; however the allowance for relocating is greater for participants who move to remote areas. In the country, there is also a university student loan payment system similar to the one of the United States NHSC, in which the physician that has at least a year of work in an area with shortage of physicians may have a reduction of 1% per month of the balance due to the Higher Education Student Financing Fund (Fundo de Financiamento ao Estudante do Ensino Superior - FIES)³⁵. Although there are few evaluations of health professional provision programs in areas in need, evidence suggests greater effectiveness of the programs combining different incentives^{7,8,16}.

Long term initiatives include changes in medical graduation and residence with the intent of promoting medical attention in vulnerable areas, especially, family and community physicians. As Australia is one of the countries that suffers the most with the shortage of physicians in remote zones, it has implemented important measures to deal with the problem from the start through the selection of students from rural areas, development of internships and residence in rural areas. Recently Australia has also increased health university campy areas in regions distant from large metropolises.

In Brazil, to increase job openings, with priority to the North, Northeast and Center West regions, considered regions with greater shortage of physicians, the Ministry of Education created in 2012 a program turned to the expansion of spaces for medical teaching in Federal Institutions of Higher Education, the IFES and established the goal to create 1,615 new places in existing Medical courses or new courses of Medicine in Federal Universities from 2013 to 2014. In order to create new courses a project was proposed for Medical Residence in the same place where the new courses are as means of support for the courses³⁶.

The Federal Government used similar criteria to those of Australia to select municipalities where new medical courses may be opened. Before Law 12,871 (which instituted the Mais Medicos Program) the location of the possible new medicine courses used to be defined with no direction defined by the Brazilian State, so that there was no assurance of internalization of the courses. This way, market determined the distribution of courses, being one of the factors that lead to the iniquity of the distribution of health professionals in the country, even taking into account that new courses should be appreciated by the National Health Council³⁸. As it can be observed in Picture 2, most medical graduation courses are located at state capitals and large cities, there being a great correlation between the place of graduation and the place of professional establishment of the physicians³⁹.

In 2013, the National Education Council began a joint effort with teaching associations, the National Health Council, the Ministry of Health and others, for the revision of national curriculum guidelines for the medicine courses which, among many measures, assures that 30% of the activities of the internships be developed in primary care services, as well as in urgency/emergency³⁷.

Ministries of Health and Education have been acting jointly for the increase of vacancies in medical residence, especially, in general family and community medicine. The Federal, State and Municipal spheres should be linked in order to make it viable that the organization contracts of public actions for teaching in health (COAPES) assure adequate environment for the service teaching integration. Telehealth has been ever more important in broadening public health care in vulnerable areas.

There are many challenges for medium and long-term actions to replace short-term measures. Strengthening the health system depends on an integrated action by all health professionals, it depends on the permanent education processes in defining and developing of general and specific competence turned to the production of health and the integrality of care. These definitions should ground the National Curriculum Guidelines and the construction of a unified graduation evaluation system, approaching institutions which form the health system. The quantitative and qualitative changes in medical training seek to assure not only the universality, but also the integrality and the sustainability of the Brazilian National Health System (SUS).

The success of these initiatives shall depend on the continuity of the federative articulation, the regulatory state policies, as well as of the continuous monitoring and improvement of the program. The potency of the "Mais Médicos" Program, among others, is related to a proposal of change which does not fear looking for new paths, which dialogs to experience, both national and international, and with individuals involved in the broadening of access and quality improvement of primary care and SUS.

Collaborators

The authors worked together in all stages of the manuscript production.

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