Implementation research: towards universal health coverage with more doctors in Brazil

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Abstracts in Arabic, Chinese, French, Russian and Spanish at the end of each article.

Introduction

Brazil’s large territory, partially covered by dense forests, is a challenge for efforts to achieve universal health access and coverage for the population. After the re-establishment of democracy and the new Constitution in 1988, access to health care was established as a constitutional right and an obligation of the state. A unified national health system – the Sistema Único de Saúde – was founded in 1988,1 based on the principles of universal, integrated health care with equality of access to all. Financed with public funds, the national health system provides preventive and curative health care free of charge.

Although the health-care system has made major advances in the past 25 years, such as enhancing the coverage of antenatal care and measles vaccination,2 transforming the constitutional right into a reality still remains a challenge.1 For example, a study by the federal medical council in October 20122 showed that there were 388,015 physicians for an estimated population of 191 million people.4 This average density of 2.00 physicians per 1000 inhabitants nationwide varied from 0.71 physicians per 1000 people in the state of Maranhão (the poorest state) to 4.09 per 1000 people in the Federal District (the wealthiest state).5 Distribution within the states was also unequal; some municipalities in the north and north-east semi-arid states had no physicians.3 The causes of these inequalities of distribution are related to problems of recruitment and retention of physicians at basic health units in the national health system.6–8 These include job insecurity and low career prospects in the public health system; poor working conditions and infrastructure in primary care facilities; and better job opportunities elsewhere.

Brazil needs an equitable distribution of the health workforce, particularly physicians, if it is to achieve the sustainable development goals (SDGs) on health and equality (SDGs 3 and 10).9,10 The tendency for physicians to concentrate in urban centres is a problem that affects many countries. Strategies for retaining health-care professionals in areas of vulnerability range from providing incentives and support, to enforcement measures such as mandatory civil service.11–15 To increase the number of primary health-care physicians for priority areas the Brazilian government set up the Mais Médicos (More Doctors) programme in July 2013. This employed strategies aligned with those proposed by the World Health Organization to improve the retention of health workers in remote and rural areas.16,17

The aim of the present study was to describe the implementation of the programme in remote and deprived areas in Brazil and to evaluate its contribution to progress towards achieving universal health access and coverage for these vulnerable populations.
The Mais Médicos programme aimed to actively recruit primary care physicians and provide incentives to retain them through better working conditions and increased investment in the primary care infrastructure. The programme also addressed the shortage of physicians in the mid- and long-term through an expansion of medical training.

All 5570 municipalities of Brazil were eligible to enrol in the first strand of the programme: the emergency provision of physicians for primary healthcare. Priority was given to municipalities with 20% or more of the population in extreme poverty; in deprived areas of state capitals and metropolitan regions; in rural and remote regions, e.g. the north-east semi-arid region and the north (Amazon) region; and with traditional populations, such as Maroon communities. All the 34 indigenous health districts that provide primary health care to 517,383 Brazilian indigenous people in forest and rural areas (2010 Census data) were prioritized. The programme offered physicians incentives to enrol, with three-year work contracts, competitive salaries (compatible to market values), lodging expenses and airline tickets to home once a year.

The second strand of the programme was to enhance the quality of primary healthcare and guarantee better working conditions for health professionals by investing in the infrastructure of basic health units. Municipalities could apply to the health ministry for funds to construct or refurbish health units or to purchase basic equipment such as refrigerators, autoclaves, otoscopes and sphygmomanometers.

The third strand was to increase the overall number of physicians in Brazil by providing more undergraduate medical school places in states where there were ≤1.5 places per 10,000 population or ≤2.7 doctors per 1000 population. The federal government planned to authorize 11,447 new undergraduate medical course places by 2017. Priority was initially for towns with a population of 70,000 inhabitants or more and without a medical school in their territory; later this changed to areas 75 km away from any medical school. The programme also made changes in the national curriculum to tailor undergraduate medical training to the national unified health system.

Implementation

The programme was launched nationwide via a provisional presidential decree on 8 July 2013 and was enacted into Law No. 12.871 of 22 October 2013. Public calls for enrolment of municipalities and recruitment of physicians were opened on the health ministry website (http://www.maismedicos.gov.br). From 8 July 2013 to 2 October 2015 there were six public calls for municipalities to join and eight public calls for physicians to enrol.

At the first public call, in July 2013, 3511 of the 5570 municipalities in Brazil enrolled in the programme and requested 15,460 physicians. Although the programme prioritized the recruitment of Brazilian physicians, only 1096 nationals spontaneously registered and were hired, while another 522 positions were occupied by physicians from other countries where the ratio of physicians to inhabitants was higher than in Brazil. Both Brazilians and the individual exchange foreign professionals could indicate up to six locations of choice. With the assistance of the Pan American Health Organization, an agreement was signed with the Cuban government to supply physicians with primary healthcare experience. Cuban physicians were sent to priority municipalities, usually remote places, which had not been chosen by Brazilian doctors.

The health ministry licensed physicians who obtained their diplomas abroad to practic medicine for three years only in the assigned municipality.

In November 2013, according to the health minister, all the regions including rural communities and the Brazilian semi-arid region had at least one doctor. By September 2015 the programme had increased to 4004 participating municipalities and provided 17,625 physicians: 11,329 (64.3%) Cubans, 5600 (31.8%) Brazilians and 696 (3.9%) professionals from other countries.

Study design

We conducted a quasi-experimental, before-and-after evaluation of the implementation of the programme in 1708 priority municipalities with remote and deprived populations. We estimated the density of physicians, i.e. the number of physicians per 1000 inhabitants, using official population estimates based on Brazilian national census data. The density of physicians across Brazil was then mapped in five bands: ≥1.0, ≥0.7 to <1.0, ≥0.4 to <0.7, ≥0.1 to <0.4, and <0.1 physicians per 1000. The health ministry defined adequate density as at least 1.0 physician per 1000 inhabitants. Vector maps were created in Quantum geographical information system software, version 2.12.0 (Open Source Geospatial Foundation; http://www.osgeo.org/).

The health ministry stipulates that each family-health team covers 3000 people. To estimate primary healthcare coverage, we obtained data on the number of primary healthcare teams and the
population in each studied municipality over the period 2011–2015. The number of teams was multiplied by 3000, divided by the number of inhabitants and multiplied by 100. Data were extracted from the health ministry’s DATASUS database. We estimated the rate of avoidable hospitalizations in each studied municipality over the period 2011–2015 from the number of hospitalizations due to ambulatory care-sensitive conditions as a percentage of the total number of clinical admissions. In Brazil 17 ambulatory care-sensitive conditions were defined in the Ministry of Health Directive MS/SAS No. 221 of 17 April 2008. Ambulatory care-sensitive conditions are those which are potentially preventable through early diagnosis, treatment of acute conditions or control and monitoring of chronic diseases. Data were obtained from the health ministry website.

It was not possible to calculate confidence limits because we employed aggregated data.

We estimated the annual expenditure in Brazilian real on construction of new basic health units and renovation of existing units in the different regions of the country over the period 2012–2015. Data were obtained from the health ministry’s Support Unit for Strategic Management database. On 31 May 2016, the conversion rate was 1 Brazilian real to US$ 0.28.

To describe trends in medical school education we obtained data on the number of medical schools and the number of undergraduate medical places per 10 000 inhabitants in the different regions over the period 1994–2015. These data were collected from the medical schools of Brazil website and from the health ministry.

Results

Distribution of municipalities

Fig. 1 shows the geographical distribution of the 1708 studied municipalities with remote or deprived populations. These were mainly concentrated in the north-east and north of the country (Amazon region) or in the mid-west and south regions at the borders. Fig. 1 also maps the distribution of the 1450 (84.9%) municipalities that enrolled in 2013–14 and were allocated physicians by the programme and the 258 municipalities eligible but not enrolled at the time of the study. Other municipalities were not included in the study.

Notes: The Mais Médicos programme was implemented in July 2013. Municipalities with remote and deprived populations were those with 20% or more of the population living in extreme poverty (per capita family income below 70 Brazilian reais, equivalent to 19.4 United States dollars) in 2013 or those in the border areas. Enrolled municipalities were those that joined the programme and received physicians allocated by the programme. Of the 1450 municipalities enrolled in the programme in 2013–14, 39 (2.7%) had dropped out by September 2015. The 258 municipalities not enrolled were eligible for the programme but never enrolled at the time of the study. Other municipalities were not included in the study.

Sources: Secretariat of Labour Management and Health Education and the Department of Planning and Regulation of the Provision of Health Care Professionals, Brazilian Ministry of Health, on request, 2015.
municipalities eligible and prioritized, but not enrolled in the programme in the period 2013–2015.

**Density of physicians**

By September 2015, 4917 physicians had been allocated by the programme to the municipalities with remote and deprived populations. They accounted for 27.9% of the total of 17 625 physicians enrolled in the whole programme. Their nationalities were 3566 from Cuba (72.5%), 1270 from Brazil (25.8%) and 81 (1.6%) from other countries. Table 1 shows the numbers of municipalities with remote and deprived populations in each region of Brazil and the number and percentage of physicians allocated by the programme to these municipalities. The highest number of physicians was allocated to the north-east (3547, 72.2%), followed by the north (952, 19.4%).

The map for 2013 shows the distribution of the 16 524 physicians already in place and incorporated into primary care teams before the programme started.

### Table 1. Enrolment of municipalities with remote and deprived populations in the *Mais Médicos* programme, and physicians allocated to these municipalities, by region, Brazil, 2013–2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Total no. of municipalities*</th>
<th>No. of municipalities with remote and deprived populations*</th>
<th>No. (%) of physicians allocated¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Enrolled¹</td>
<td>Total</td>
</tr>
<tr>
<td>North</td>
<td>450</td>
<td>253</td>
<td>228</td>
</tr>
<tr>
<td>North-east</td>
<td>1795</td>
<td>1287</td>
<td>1077</td>
</tr>
<tr>
<td>South-east</td>
<td>1659</td>
<td>73</td>
<td>61</td>
</tr>
<tr>
<td>South</td>
<td>1200</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>Mid-west</td>
<td>466</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td>All regions</td>
<td>5570</td>
<td>1708</td>
<td>1450</td>
</tr>
</tbody>
</table>

* Total number of municipalities in each region in 2013.

* Municipalities with remote and deprived populations were those with 20% or more of the population living in extreme poverty (per capita family monthly income below 70 Brazilian reais, equivalent to 19.4 United States dollars) in 2013, and those located in the border areas.

¹ Of the 1450 municipalities initially enrolled in the programme 39 (2.7%) had dropped out by September 2015.

¹² Physicians allocated by the programme to municipalities with remote and deprived populations by September 2015.

Sources: Total number of municipalities were obtained from national census data from the Brazilian Institute of Geography and Statistics. Numbers of municipalities with remote and deprived populations and numbers of physicians allocated were obtained from the Secretariat of Labour Management and Health Education and the Department of Planning and Regulation of the Provision of Health Care Professionals at the Brazilian Ministry of Health, on request, 2015.
in the 1450 studied municipalities (Fig. 2). After implementation of the programme, 4917 new doctors joined, increasing by 29.8% the availability of medical doctors. There was an increase in the number of physicians per 1000 inhabitants in municipalities with remote and deprived populations. In 2013 there were 292 municipalities with < 0.4 physicians per 1000 inhabitants, and this declined to 81 municipalities in 2015 (decrease of 72.3%). The number of municipalities with ≥ 1.0 physicians per 1000 inhabitants rose from 163 to 348 during the same period, an increase of 113.5% (Fig. 2).

### Primary care coverage

In 2012, there were a total of 6948 primary care teams for a population of 26 742 974 in the enrolled municipalities, a coverage level of 77.9% (100% coverage was 3000 inhabitants per team). By 2015 there were 8038 teams serving 27 929 381 inhabitants, a coverage level of 86.3% (Table 2). Throughout the period 2011–2015, municipalities that did not enrol in the programme had high coverage of primary health care (around 95%), which may explain why they were not interested in enrolling in the programme.

### Avoidable hospitalizations

In 2012 the percentage of hospitalizations for ambulatory care-sensitive conditions in the municipalities enrolled in the programme was 44.9% (342 908 of the total clinical admissions of 764 342). This decreased to 41.2% (298 566 of 724 921 admissions) by 2015, a decrease of 8.8% (Table 3). By contrast, the rate remained unchanged over this period in the municipalities not enrolled in the programme.

### Infrastructure investments

Investments in basic health units totalled 1.10 billion Brazilian reais in the

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Table 2. Primary health-care coverage in municipalities with remote and deprived populations and enrolled or not enrolled in the Mais Médicos programme, before and after implementation of the programme in Brazil, 2011–2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population</th>
<th>No. of PHC teams</th>
<th>No. of inhabitants per PHC team</th>
<th>Coverage, (%)</th>
<th>Municipalities enrolled (n = 1450)</th>
<th>No. (%) of avoidable hospitalizations</th>
<th>No. of PHC teams</th>
<th>No. of inhabitants per PHC team</th>
<th>Coverage, (%)</th>
<th>Municipalities not enrolled (n = 258)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>26 538 610</td>
<td>6901</td>
<td>3846</td>
<td>78.0</td>
<td>2 364 218</td>
<td>753</td>
<td>3140</td>
<td>95.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>26 742 974</td>
<td>6948</td>
<td>3849</td>
<td>77.9</td>
<td>2 375 778</td>
<td>754</td>
<td>3151</td>
<td>95.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>27 583 700</td>
<td>7354</td>
<td>3751</td>
<td>80.0</td>
<td>2 437 540</td>
<td>784</td>
<td>3109</td>
<td>96.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>27 762 204</td>
<td>7933</td>
<td>3500</td>
<td>85.7</td>
<td>2 446 769</td>
<td>789</td>
<td>3101</td>
<td>96.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>27 929 381</td>
<td>8038</td>
<td>3475</td>
<td>86.3</td>
<td>2 458 039</td>
<td>777</td>
<td>3163</td>
<td>94.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHC: primary health care.

a Of the 1450 municipalities initially enrolled in the programme 39 (2.7%) had dropped out by September 2015. The 258 municipalities not enrolled were eligible for the programme but never enrolled at the time of the study.

b The total population was divided by the number of PHC teams to obtain the number of inhabitants per primary health-care team. This figure was then converted to a percentage, in which 100% coverage was 3000 inhabitants per PHC team, as recommended by the Brazilian Ministry of Health.

Notes: Mais Médicos programme was implemented in July 2013. We studied 1708 municipalities with remote and deprived populations, which were those with ≥ 20% or more of the population living in extreme poverty (per capita family monthly income below 70 Brazilian reais, corresponding to 19.4 United States dollars) in 2013, and those located in the border areas.

Sources: DATASUS health portal, Ministry of Health; Evaluation and Information Management website, Ministry of Social Development.

Table 3. Rate of potentially avoidable hospitalizations in municipalities with remote and deprived populations, before and after implementation of the Mais Médicos programme in Brazil, 2011–2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Total no. of clinical admissions</th>
<th>No. (%) of avoidable hospitalizations</th>
<th>Total no. of clinical admissions</th>
<th>No. (%) of avoidable hospitalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>833 111</td>
<td>376 182 (45.2)</td>
<td>74 549</td>
<td>33 227 (44.6)</td>
</tr>
<tr>
<td>2012</td>
<td>764 342</td>
<td>342 908 (44.9)</td>
<td>69 078</td>
<td>30 831 (44.6)</td>
</tr>
<tr>
<td>2013</td>
<td>792 385</td>
<td>356 695 (45.0)</td>
<td>69 918</td>
<td>31 710 (45.4)</td>
</tr>
<tr>
<td>2014</td>
<td>765 845</td>
<td>332 498 (43.4)</td>
<td>69 247</td>
<td>31 882 (46.0)</td>
</tr>
<tr>
<td>2015</td>
<td>724 921</td>
<td>298 566 (41.2)</td>
<td>65 249</td>
<td>29 771 (45.6)</td>
</tr>
</tbody>
</table>

a Of the 1450 municipalities initially enrolled in the programme 39 (2.7%) had dropped out by September 2015. The 258 municipalities not enrolled were eligible for the programme but never enrolled at the time of the study.

b Rate of potentially avoidable hospitalizations was the number of hospitalizations due to ambulatory care-sensitive conditions as a percentage of the total number of clinical admissions. A set of 17 ambulatory care-sensitive conditions were defined in Brazilian Ministry of Health directive MS/SAS no. 221 of 17 April 2008.

Notes: Mais Médicos programme was implemented in July 2013. Municipalities with remote and deprived populations were those with ≥ 20% or more of the population living in extreme poverty (per capita family monthly income below 70 Brazilian reais, corresponding to 19.4 United States dollars) in 2013, and those located in the border areas.

Sources: DATASUS health portal, Ministry of Health; Evaluation and Information Management website, Ministry of Social Development.
period 2012–2015, mostly concentrated in 2013, the year the programme was created. These included funds for the construction of 3496 new basic health units and refurbishment of 3417 units. Investments in the municipalities that enrolled in the programme totalled 4275 million Brazilian reais in 2013: 83.4% higher than in those that did not enrol (2331 million Brazilian reais; Fig. 3).

Investments in the municipalities with remote and deprived populations were those with 20% or more of the population living in extreme poverty (per capita family income below 70 Brazilian reais, equivalent to 19.4 United States dollars) in 2013 or those in the border areas. Of the 1450 municipalities initially enrolled in the programme 39 (2.7%) had dropped out by September 2015. The 238 municipalities not enrolled were eligible for the programme but never enrolled at the time of the study. Data were not available for investments before 2012. The 258 municipalities not enrolled were eligible for the programme but never enrolled by September 2015. The 25 (9.3%) had dropped out by September 2015. The 238 municipalities not enrolled were eligible for the programme but never enrolled at the time of the study. Data were not available for investments before 2012.

We observed a similar pattern with respect to the distribution of undergraduate places in medical schools in 2013. The south-east had 10,639 (43.6%) of the total of 24,401 places and the north-east had 6,651 (24.8%) places. There was an increasing availability of undergraduate medical places in Brazil over the years 1994–2015 (Fig. 4). Between 2012 and 2015, however, there was a marked increase in availability of medical school places in all regions of the country, especially the priority areas in the north-east and mid-west. The number of undergraduate places in medical schools in Brazil rose from 0.83 per 10,000 inhabitants in 2012 to 1.07 per 10,000 in 2015.

### Discussion

The Mais Médicos programme provides physicians to areas where deprived populations are living in conditions of extreme poverty. Working towards a goal of guaranteeing the right to universal health care, the programme facilitates access to health services for people who have seldom, or never, had access to that right.

The municipalities that we studied were remote, and in the case of the Amazon region may be accessible only by boat or aeroplane. These regions face problems of recruitment and retention of physicians, primarily because they are far from large urban centres. Previous interventions such as PROVAB, based on successes in other countries – did not achieve the desired results, especially in the remote areas, due to low participation by Brazilian physicians. The Mais Médicos programme was set up to make more effective changes in the provision and attachment of physicians to primary health care. There was some resistance at first, especially from the Federal Medical Council, which headed a petition in the Supreme Court alleging that the programme was unconstitutional. The request was not approved, but disputes continue, due to controversy about hiring foreign doctors. The general public, however, has recognized the need for more physicians as many areas in Brazil have had insufficient numbers of physicians for long periods. Opinion polls conducted by the Brazilian National Transport Confederation, disclosed that the programme was approved by 49.7%,

### Medical school places

In 2013, 109 (40.7%) of the 268 medical schools in Brazil were in the richer south-east, whereas only 22 (8.2%) were in the north and 25 (9.3%) in the mid-west. From 2013 to 2016 a total of 70 new medical schools were created (public and private), offering 5,540 new places for medical students. More than half of the new schools (38 schools; 54.3%) were in the more deprived regions of the north-east, mid-west and north, thus contributing to decreased regional differences.

The Mais Médicos programme was implemented in July 2013 in eligible municipalities in all regions. The programme was set up to make undergraduate places in medical schools in Brazil over the years 1994–2015 (Fig. 4).

Note: The Mais Médicos programme was implemented in July 2013 in eligible municipalities in all regions. Sources: Secretariat of Labour Management and Health Education, Ministry of Health. Medical schools of Brazil website.

Fig. 3. Investment in the construction and renovation of basic health units in municipalities with remote and deprived populations, before and after implementation of the Mais Médicos programme in Brazil, 2012–2015

Fig. 4. Number of undergraduate places in medical schools per 100,000 inhabitants, by region of Brazil, 1994–2015

Note: The Mais Médicos programme was implemented in July 2013 in eligible municipalities in all regions. Sources: Secretariat of Labour Management and Health Education, Ministry of Health. Medical schools of Brazil website.
In conclusion, the Mais Médicos programme was successful in the immediate provision of physicians to work in primary health care with the most remote and deprived populations. In the longer term the programme assured investments, refurbishment and construction of basic health units and expansion of the network of medical schools, following a more equitable geographical distribution. Similar strategies could be established in other countries with a shortage of physicians, especially underdeveloped nations, to contribute towards achieving universal health access and coverage for all as proposed by the SDGs.

Competing interests: None declared.

More doctors for deprived populations in Brazil

Leonor Maria Pacheco Santos et al.
摘要

实施研究：凭借扩大医生队伍在巴西实现全民健康覆盖的目的旨在评估一项为巴西偏远地区和贫困地区人群提供初级护理医师计划的实施情况。

方法：伴随者公众为重地区招募医生的呼声，Mais Médicos（扩大医生队伍）计划在2013年7月启动。也采取了其他策略，以增加初级护理基础设施投资并扩大医学院招生计划。我们对该计划在1708个地区的实施情况进行了准实验，前后对比评估，这些地区的居民生活极端贫困的区域以及偏远边境区域。我们对参与地区（n=1450）和未参与地区（n=258）的医师密度、初级护理覆盖率以及可避免住院率进行了比较。我们对从卫生信息系统和卫生部出版物中提取的数据进行了分析。

结果：截止2015年9月，在偏远和贫困地区，在原有的16524名医师的基础上新招了4917名医师。从2013年163到2015年348，每1000名居民配有1.0名医生的地区数量增加了。参与地区的初级护理覆盖率（基于每个初级护理团队3000名医师）从2012年的77.9%增至2015年的86.3%。参与地区的可避免住院率从2012年的44.9%降至2015年的41.2%，但对照地区的可避免住院率保持不变。我们也证实，在调查期间，参与地区增加了基础设施投资且扩大了医学院招生计划。

结论：其他存在医师短缺问题的国家可以学习巴西实现全民健康权利计划的经验并从中受益。

Résumé

Recherche opérationnelle: davantage de médecins pour aller vers la couverture sanitaire universelle au Brésil

Objectif Évaluer la mise en œuvre d’un programme destiné à renforcer la présence de médecins généralistes auprès des populations isolées et défavorisées du Brésil.

Méthodes Dans le cadre du programme Mais Médicos (plus de médecins), qui a débuté en juillet 2013, des appels publics ont été lancés afin de recruter des médecins dans les zones prioritaires. D’autres stratégies ont consisté à augmenter les investissements dans les infrastructures de soins primaires et à ouvrir plus de places dans les écoles de médecine. Nous avons réalisé une évaluation quasi-experimentale, avant-après, de la mise en œuvre du programme dans 1708 municipalités dont certaines populations vivaient en situation d’extrême pauvreté ainsi que dans des zones frontalières reculées. Nous avons comparé la densité de praticiens, la couverture de soins primaires et le nombre d’hospitalisations évitables dans les municipalités qui participaient au programme (n=1450) et celles n’y participaient pas (n=258). Des données extraites de systèmes d’information sanitaire et de publications du ministère de la Santé ont été analysées.

Résultats: Au mois de septembre 2015, 4917 médecins étaient venus s’ajouter aux 16 524 praticiens déjà en place dans des municipalités où vivaient des populations isolées ou défavorisées. Le nombre de municipalités comptait ≥1,0 médecin pour 1000 habitants avait doublé, passant de 163 en 2013 à 348 en 2015. La couverture de soins primaires dans les municipalités participantes (sur la base de 3000 habitants par équipe de soins primaires) était passée de 77,9% en 2012 à 86,3% en 2015. Le nombre d’hospitalisations évitables dans les municipalités participantes était passé de 44,9% en 2012 à 41,2% en 2015, mais était resté identique dans les municipalités témoins. Sur la période étudiée, nous avons également observé une hausse des investissements dans les infrastructures dans les municipalités participantes ainsi qu’une augmentation du nombre de places dans les écoles de médecine.

Conclusion: D’autres pays qui souffrent d’une pénurie de médecins pourraient s’inspirer des leçons du programme brésilien pour garantir le droit de tous à la santé.

Резюме

Исследование внедрения: увеличение количества врачей в Бразилии как шаг на пути к предоставлению всеобщего ухода здравоохранения

Цель: Оценить реализацию программы по направлению врачей общей практики для оказания медицинской помощи бедным группам населения и группам, живущим в отдаленных районах Бразилии.

Методы: Программа Mais Médicos (Больше врачей) была начата в июле 2013 года с открытого конкурса для врачей в приоритетных областях. Другие стратегии включали увеличение объема инвестиций в инфраструктуру основной медицинской помощи и обеспечение большего количества мест в медицинских учебных заведениях. Мы провели квазэкспериментальную оценку реализации программы перед началом и после ее окончания в 1708 муниципалитетах с населением, живущим в условиях крайней нищеты и в отдаленных приграничных районах. Мы сравнили плотность врачей, охват первичной медицинской помощью и количество предотвратимых случаев госпитализации в муниципальных образованиях, включенных (n=1450) и не включенных (n=258) в программу. Были проанализированы данные, извлеченные из информационных систем здравоохранения и публикаций Министерства здравоохранения.

Результаты: По состоянию на сентябрь 2015 года к 16524 врачам, уже работающим в муниципалитетах с бедными группами населения и группами, живущими в отдаленных районах, добавилось 4917 врачей. Число муниципалитетов с ≥1,0 врачей на 1000 жителей увеличилось в два раза: с 163 в 2013 году до 348 в 2015 году. Охват первичной медико-санитарной помощью во включенных муниципальных образованиях (3000 жителей на команду по оказанию первичной медицинской помощи) увеличился с 77,9% в 2012 до 86,3% в 2015 году. Количество предотвратимых случаев госпитализации во включенных муниципалитетах снизилось с 44,9% в 2012 до 41,2% в 2015 году, но осталось неизменным в муниципалитетах сравнения. Мы также зарегистрировали более высокие инвестиции в инфраструктуру во включенных муниципалитетах и увеличение в медицинских учебных заведениях в течение периода исследования.

Вывод: Другие страны, страдающие от дефицита врачей, могут извлечь пользу из программы Бразилии на пути к обеспечению всеобщего права на охрану здоровья.
Investigación sobre la ejecución: hacia la cobertura sanitaria universal con más médicos en Brasil

Objetivo
Evaluar la implementación de un programa que ofrezca médicos de atención primaria para poblaciones remotas y desfavorecidas de Brasil.

Métodos
En julio de 2013 se lanzó el programa Mais Médicos (Más Médicos), el cual hizo un llamamiento público para contratar médicos para zonas prioritarias. Otras estrategias fueron aumentar las inversiones en infraestructuras de atención primaria y proporcionar más plazas en las escuelas de medicina. Se realizó una evaluación cuasiexperimental antes y después de la implementación del programa en 1 708 municipios con una población en extrema pobreza, así como en zonas fronterizas remotas. Se comparó la densidad de médicos, la cobertura de atención primaria y las hospitalizaciones evitables en los municipios inscritos (n = 1 450) y no inscritos (n = 258) en el programa. Se analizaron los datos recopilados de los sistemas de información sanitaria y de publicaciones del Ministerio de Sanidad.

Resultados
En septiembre de 2015, se sumaron 4 917 médicos a los 16 524 que ya se encontraban en municipios con poblaciones remotas y desfavorecidas. El número de municipios con ≥ 1,0 médico por cada 1 000 habitantes se duplicó, de 163 en 2013 a 348 en 2015. La cobertura de atención primaria en municipios inscritos (basada en 3 000 habitantes por equipo de atención primaria) aumentó de un 77,9% en 2012 a un 86,3% en 2015. Las hospitalizaciones evitables en municipios inscritos se redujeron de un 44,9% en 2012 a un 41,2% en 2015, pero permanecieron sin cambios en los municipios de control. También se documentaron mayores inversiones en infraestructuras en los municipios inscritos y un aumento en el número de plazas de las escuelas de medicina durante el periodo de estudio.

Conclusión
Otros países con escasez de médicos podrían beneficiarse de las lesiones del programa brasileño para conseguir un derecho universal a la sanidad.

References
Research

More doctors for deprived populations in Brazil

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