ORIGINAL ARTICLE

Health production: analysis of doctors' health actions in the More Doctors program

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SUMMARY

OBJECTIVE: *Analyze the health actions carried out by the Cuban cooperated physicians and their relationship with socioeconomic characteristics of the municipalities, contained in the first supervision visit report, in 2015.*

METHODS: *This is a quantitative research that used secondary data from the reports of the 1st supervision visit of the "More Doctors Program". The dependent variables were the health actions, and the independent variables were the type of municipality, Human Development Index (HDI), Investment in Primary Health Care (PHC), health center coverage, rural population, and total population. Multiple correspondence analysis was used to identify the latent variable, related to the profile of the professional with respect to the actions/procedures carried out to which the characteristics of the municipalities were associated through frequency analysis.*

RESULTS: *Three profiles of professionals were obtained, who have their practices associated with the professional training, consolidating as a determining factor for carrying out actions compatible with the actual needs of the population. Such findings were associated with the socioeconomic variables, with emphasis on funding, health center infrastructure, and coverage.*

CONCLUSIONS: *From the observed results, we suggest strategies to expand the scope of the practices carried out in Primary Health Care, from the perspective of training and continuing education of health professionals, and the focus on the everyday life of the service being of paramount importance.*

KEYWORDS: *Primary Health Care. Family Health. Health Policy.*

INTRODUCTION

The insufficient number of workers, the demographic/epidemiological transition, and the deployment of new health care models interfere with the need for health professionals and represent the main critical issues of universal access to health actions[1,2].

The scarcity of physicians to fill job positions in the Brazilian health system is a very complex and multifactorial problem that is not restricted to overcoming a unfavorable physician-inhabitant ratio. Over time, new job openings for physicians have been offered in the country, and the number of openings is greater than the number of medical school graduates[3].

Countries such as Canada, England, Holland, and Australia depend on foreign professionals to meet the demands of their populations. Australia also faces shortages of professionals in remote areas, and the

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number of medical internships is not enough to meet their needs[4].

In Brasil, this scarcity is not evenly distributed due to geographical aspects and on account of the different health care levels of the Single Health System (SUS). Primary Health Care (PHC) is the most affected by this reality, with a great turnover of physicians and openings that are not filled in municipalities with greater social vulnerability[5].

In this context, the More Doctors Program (PMM - *Programa Mais Médicos*) was established by Law no. 12,871, on 22 October 2013, with the main purpose of solving problems relating to PHC in the scope of the SUS. The program is intended to train health professionals in the medical area of the SUS. For such, it is structured around three strategic axes: training for the Single Health System (SUS); infrastructure improvement for Basic Health Units (UBS), and emergency provision of physicians[1].

The implementation of the PMM was marked by strong resistance from the medical corporation due to the participation of foreign doctors, particularly Cubans. The resistance was based on aspects related to the shortcomings of health professionals in the labor market and to medical training, regarding the broadness and scope of foreign practices. Another aspect that was questioned was the quality of Cuban medical training to comply with the complexity of the actions required to work in primary care in the SUS[6].

After more than six years from the deployment of the PMM, with more than 18,000 doctors recruited between 2013 and 2016, it is possible to see there was a reduction in the shortage of primary care physicians, particularly in more vulnerable areas. The program was spread throughout almost the entire national territory, with greater participation of Cuban doctors, who, by 2014, accounted for 79% of the participants[6,7].

Despite the positive repercussions on the implementation and qualification of basic care, the program was unable to intervene in the structural impediments of Primary Health Care in the scope of the SUS due to its provisional character, and also on account of temporary contracts, under which the program physicians are paid through fixed grants[8,9].

In face of these aspects, this study aims to analyze the health actions carried out by the participating Cuban doctors and their relationship with socioeconomic metrics contained in the reports of the supervision first visit of the PMM, from 2015.

METHODS

This is a quantitative and observational study based on secondary data from the reports from the first supervision visit of the PMM, conducted in 2015, in the 3,816 Brazilian municipalities.

The pedagogic supervision reports were filled out by the PPM supervisors and made available *online*, hosted on the website of the Ministry of Education and in the Webportfolio System/UNA-SUS. We considered the set of actions of promotion, prevention, and health care that covers aspects of the list of doctors' activities that point to a more comprehensive and resolvent care and influential, such as the broad portfolio of services for the promotion, prevention and care, attention to spontaneous and scheduled demand, integration with other health services, interdisciplinarity, planning of interventions, and the use of clinical protocols[6].

This study focuses on health actions of the More Doctors Program, represented by a set of variables, namely: a) actions in health education; (b) actions to promote healthy eating habits and the practice of physical exercise; c) promotion and prevention actions (immunization); (d) promotion and prevention actions (cytologic collection); e) actions of child health; f) actions of women's health; (g) actions of adult health; h) actions of mental health and spontaneous demand; and (i) urgent and emergency care.

The independent variables are related to the socioeconomic conditions of the municipalities where the Cuban doctors were acting at the time of supervision, among them the type of municipality and the infrastructure of the units.

Initially, we performed a descriptive analysis of the frequency of the main actions developed by the professionals. Aiming to establish a profile of the professionals regarding these actions, we carried out a multiple correspondence analysis, which generated the variable "Health Production" and three profiles of professionals.

Correspondence analysis is the method applicable to situations in which the aim is to analyze a latent variable from the combination of different categorical variables. After including all variables related to health actions carried out (coded as "yes" and "no") in the model, a perceptual map is generated, in which the groups may be observed in dimensions and, thus, the characterization of health actions that compose a latent variable can be established.

Finally, we associated the professional profiles with the indicators in order to assess whether these different profiles could be associated with certain socioeconomic characteristics of the municipalities where these professionals acted.

It is also worth mentioning that this study involved secondary data; thus, it was not necessary to submit it to the Research Ethics Committee.

RESULTS

Figure 1 presents the results related to the health actions, divided by strata and Brazilian regions. Regarding the implementation of the actions, the most frequently carried out per region stratum were actions of spontaneous demand, carried out with greater frequency in the Central-West, Northeast, and Southeast regions.

Then, we can observe the actions of programmatic cycles, such as those of child, women, and adult health. When it comes to actions of child and women health, they are performed with greater frequency in the North, Northeast, and Central-West regions; whereas adult health actions are more often carried out in the Central-West, South, and Southeast regions, and less frequently in the North Region.

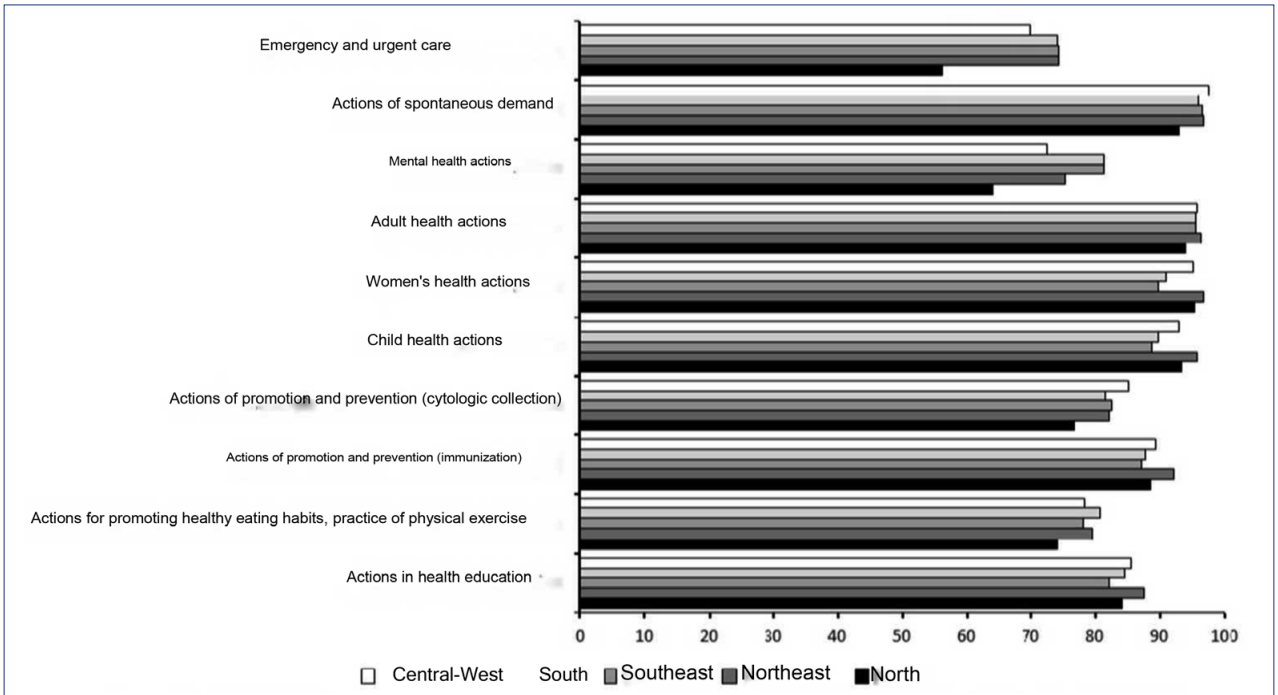
The actions less frequently carried out were those of mental health, urgent and emergency care, and the promotion and educational actions in health and prevention of diseases and injuries.

Upon an analysis per region stratum, it is possible to see that the actions of urgent and emergency care and mental health, as well as actions for the promotion of healthy eating habits and practice of physical exercise occur more frequently in the South and Southeast regions, with less prevalence in the North region of the country. Is possible to observe that promotion and prevention (cytologic collection and immunization) are less frequent in the North region of the country.

In short, from the analysis per region stratum, we observed fewer actions of urgent and emergency care, mental health, and promotion of healthy eating habits and practice of physical exercise, as well as those for promotion and prevention (cytologic and immunization). The North region stands out with fewer actions than the national average, which may be linked to a network of services with gaps and the lack of service structuring.

After analyzing the actions carried per stratum of Brazilian regions, we conducted a multiple correspondence analysis, which generated a grouping of variables into three profiles of actions, whose final result is expressed in the perceptual map (Figure 2). Once this variable was defined, we assessed its association with socioeconomic characteristics and the health services of municipalities (Table 1).

FIGURE 1. SILVEIRA NJD. PERCENTAGE DISTRIBUTION OF HEALTH ACTIONS CARRIED OUT BY DOCTORS OF THE MORE DOCTORS PROGRAM. SOURCE: FIRST PMM SUPERVISION REPORT.



The multiple correspondence analysis enabled the creation of a latent variable, which was called "production of actions in primary health care." This title emerges from the National Health Promotion Policy, which defines health promotion as an "effort to cope with the challenges of health production", considering also the production of health associated with the "production of active, critical, involved, and supportive subjectivities"[10,11].

Health´production here is understood as the production of life and health, which necessarily can only be conceived in the context of otherness. Thus, much more than a field of science, the production of health actions is the affirmation of life. The production of health is related to everyday life, styles and ways of living, which establish new ways of life[11].

Therefore, in the present study, the production of health was built from the perspective of interconnectivity, generating three profiles of professionals: profile 1 - "integral actions"; profile 2 -"actions in programmatic cycles"; profile 3 - "actions of health promotion, prevention, and education".

Profile 1 - Integral Actions

Integral actions involve the health actions that are expected to meet the real demands of Primary Health Care, but that become differentiated since they are not carried out effectively in Family Healthcare Units by the teams in general, but that became possible upon the placement of the medical professional, as illustrated in Figure 2[12].

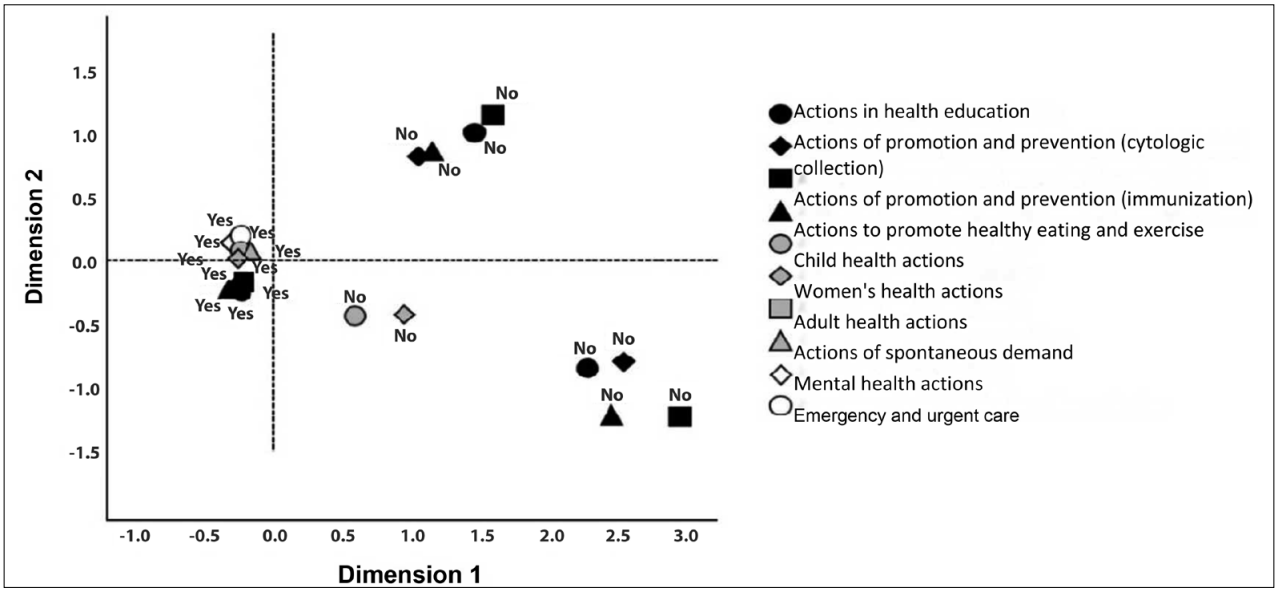
When analyzing the correlation of this category with the Brazilian regions, we found in the South, and Southeast regions a greater number of professionals with this profile. We also found that the highest number of expected actions carried out was in the capitals and that they are associated with a better infrastructure of Family Health Units, which may corroborate a better physical structure and network of services of the municipalities studied.

Profile 2 - Actions of programmatic cycles

TABLE 1. PERCENTAGE DISTRIBUTION OF THE PROFESSIONAL PROFILES, ACCORDING TO SOME OF THE SOCIOECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF THE MUNICIPALITIES.

	Profile 1 - Integral actions	Profile 2 - Actions of programmatic cycles	Profile 3 - Health promotion, prevention, and education actions	Total
Region				
North	30.9%	32.1%	37.0%	1,871
Northeast	44.9%	23.3%	31.8%	5,360
Southeast	47.9%	20.2%	32.0%	4,448
South	45.6%	24.1%	30.3%	2,594
Central-West	42.2%	26.5%	31.3%	1,124
Infrastructure				
Suitable	46.6%	24.6%	28.8%	11,682
Inadequate	35.6%	21.5%	42.9%	3,715
Type of Municipality				
Capital	47.4%	17.3%	35.3%	1,882
Interior	43.4%	24.8%	31.7%	13,472

FIGURE 2. SOURCE: MULTIPLE CORRESPONDENCE ANALYSIS FROM THE DATABASE OF REPORTS OF THE FIRST PMM SUPERVISION.



The actions of the programmatic cycles are consistent with the teams that carry out more restricted actions, focused on programmatic life cycles, with a more "curative", "medicamental", and "hospital-centered" perspective.

We found that in the North and Central-West regions, which are more vulnerable, there is less prevalence of these actions. As to its association with socioeconomic factors, we found a greater number of actions in the countryside and in municipalities with adequate physical structure.

Profile 3 - Health promotion, prevention, and education

The third profile put together from the analysis of correspondence was associated with the actions of promotion and prevention (cytologic collection and immunization), promotion of healthy eating habits and physical exercise, and health education.

When analyzing the profile by region, we found that in the North Region there was a higher frequency of professionals with this profile, with a certain equivalence between the other regions. In fact, the physical structure became a quite explanatory variable for this profile of professionals, considering that actions of promotion, prevention, and education can occur without major losses in capitals, in regions with inadequate physical structure.

DISCUSSION

The creation of the More Doctors Program (PMM), beyond doubt, represented an important step towards meeting the demands of PHC. The presence of professionals from the PMM in 4,058 municipalities benefited approximately 63 million people, promoting the integration of teams and strengthening health actions, with a positive impact also in the reduction of some indicators, such as the hospitalizations due to sensitive conditions and child mortality[13-15].

The associations of health production with socioeconomic indicators point to inequities in health, to the extent that a scope of actions consistent with the real demands of the population is carried out in more developed regions, with a decrease in more vulnerable regions. In this process, there is a rupture of the fundamental principles of the SUS, i.e., equity in health, since these actions should be carried out in the regions of greater vulnerability, which, in general, there are those that require a greater scope of professional activities to be implemented.

The discussion about the actions that must be carried out in PHC, with a focus on medical professionals, goes beyond the training and skills required and is strongly related with the professional's desire to work on Primary Health Care through the bond established with the territory, teamwork, flexibility, and sensitivity for humanizing care[5].

In this context, a study conducted by Facchini et al.[16] concluded that the professional practice of FHS teams suffers from the incompleteness of the offer of health actions and care, despite the availability of reference standards, guidelines, goals, and work protocols. Something we observed in this study, in Profiles 2 and 3, is that the medical professionals do not carry out the full scope of actions that the practices of Primary Health Care require, which cannot be confused with the quality of the actions, considering that this research was aimed at professionals with the same training, thus the importance of socioeconomic variables are highlighted to explain the differences in the scope of actions.

Feitosa et al.[17] corroborate this discussion by observing that the inadequate infrastructure of UBSs - for example, the lack of equipment and the precariousness of labor relations - influences the quality of care provided to the population 18.

In contrast, there is evidence that, with the deployment of the PMM, the allocation of financial resources for Primary Health Care tripled. This is also attributed to the resources of the Program for the Rehabilitation of Basic Health Units, which provided an increase in the budget allocated to Primary Health Care to improve the ambiance of UBSs, the working conditions of professionals, and the funding and broadening of the scope of service practices[17,18].

CONCLUSIONS

In the face of this discussion, we propose strategies to expand and qualify the infrastructure of units, highlighting the importance of investments so that the full scope of actions required can be implemented. We add to the discussion the need for investments, from the perspective of training and continuing education of health professionals, with a fundamental emphasis in the daily aspects of service, specialization programs, residence, and professional master's in family health, access to evidence of assessments of health policies

and actions that are relevant to solving local problems and their generalization to the basic health network. Educational activities allow for the development of professional skills, improving the scope and breadth of the provision of care[19-21].

Author's Contribution

Natércia Janine Dantas da Silveira: was responsible for writing the manuscript, tabulating the data, and helped compile the theoretical references; Lyane Ramalho Cortez: contributed with the correction/revision of the final version of the manuscript and helped compile the theoretical references; Yan Nogueira Leite de Freitas: contributed with the revision of the manuscript, statistical analysis and database research in order to enrich the theoretical framework of the study; Angelo Giuseppe Roncalli: was responsible for counseling throughout the entire process, from the conception of the study to its final adjustments.

RESUMO

OBJETIVO: *Analisar as ações em saúde realizadas pelos médicos cooperados cubanos e sua relação com características socioeconômicas dos municípios, contidas no primeiro relatório de visita de supervisão, em 2015.*

MÉTODOS: *Pesquisa quantitativa que utilizou dados secundários dos relatórios da primeira visita de supervisão do Programa Mais Médicos. A variável dependente foram as ações em saúde e as variáveis independentes foram o tipo de município e infraestrutura. Utilizou-se a análise de correspondência múltipla para a identificação da variável latente, relativa ao perfil do profissional com relação às ações realizadas, a qual foi associada às características dos municípios por intermédio de análise de frequência.*

RESULTADOS: *Foram obtidos três perfis de profissionais, que possuem suas práticas associadas à formação profissional, consolidando-se como um fator determinante para efetivação de ações condizentes com as reais necessidades da população. Tais achados estiveram associados às variáveis socioeconômicas, tendo como destaques a infraestrutura das unidades e o tipo de município.*

CONCLUSÕES: *A partir dos resultados observados, sugerem-se estratégias para ampliar o escopo das práticas desenvolvidas na APS, na perspectiva de formação e educação permanente de profissionais de saúde, sendo fundamental a ênfase no cotidiano do serviço.*

PALAVRAS-CHAVE: *Atenção Primária à Saúde. Saúde da Família. Política de Saúde.*

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