

Analysis of the medical demography of a municipality of Goiás

Análise da demografia médica de um município Goiano

Análisis de la demografía médica de un municipio de Goiano

RESUMO

Objetivo: Analisar a demografia médica de um município do interior do Brasil, a partir dos dados do Cadastro Nacional de Estabelecimentos de Saúde (CNES). Método: Estudo descritivo, de dados secundários, referente ao município de Aparecida de Goiânia. Resultado: O município contava com 1.562 médicos, sendo 59,8% homens, e relação de 2,65 médicos/mil habitantes. O nível primário contava com 141 profissionais, sendo 58,8% mulheres e razão de 0,24 médicos/mil habitantes. A rede pública ofertava 54 especialidades médicas, sendo 11 disponíveis apenas na rede conveniada. 83,3% das especialidades foram consideradas clínicas e o restante cirúrgicas. As UBS perfaziam 60% dos estabelecimentos públicos e 95,8% dos médicos eram não estatutários. Conclusão: A relação médico/habitante no município é relativamente boa. O perfil médico é predominantemente masculino e concentra-se na atenção secundária e terciária. Percebeu-se a fragilidade dos vínculos empregatícios e a desigualdade de distribuição de médicos e especialidades na rede de atenção.

DESCRIPTORIOS: Médicos; Atenção Primária à Saúde; Recursos Humanos.

ABSTRACT

Objective: To analyze the medical demography of a municipality in the interior of Brazil, based on data from the National Registry of Health Establishments (CNES). Method: Descriptive study of secondary data, referring to the municipality of Aparecida de Goiânia. Result: The municipality had 1,562 doctors, 59.8% of whom were men, and a ratio of 2.65 doctors/1,000 inhabitants. The primary level had 141 professionals, 58.8% of whom were women and a ratio of 0.24 physicians/1,000 inhabitants. The public network offered 54 medical specialties, 11 of which were available only in the affiliated network. 83.3% of the specialties were considered clinical and the rest were surgical. UBS made up 60% of public establishments and 95.8% of physicians were non-statutory. Conclusion: The doctor/inhabitant relationship in the municipality is relatively good. The medical profile is predominantly male and focuses on secondary and tertiary care. The fragility of employment relationships and the unequal distribution of doctors and specialties in the care network were noticed.

DESCRIPTORS: Physicians; Primary Health Care; Workforce.

RESUMEN

Objetivo: Analizar la demografía médica de un municipio del interior de Brasil, a partir de datos del Registro Nacional de Establecimientos de Salud (CNES). Método: Estudio descriptivo de datos secundarios, referentes al municipio de Aparecida de Goiânia. Resultado: El municipio contaba con 1.562 médicos, de los cuales el 59,8% eran hombres, y una relación de 2,65 médicos/1.000 habitantes. El nivel primario contaba con 141 profesionales, de los cuales el 58,8% eran mujeres y una relación de 0,24 médicos/mil habitantes. La red pública ofrecía 54 especialidades médicas, 11 de las cuales estaban disponibles sólo en la red afiliada. El 83,3% de las especialidades se consideraron clínicas y el resto quirúrgicas. Las UBS constituían el 60% de los establecimientos públicos y el 95,8% de los médicos no eran estatutarios. Conclusión: La relación médico/habitante en el municipio es relativamente buena. El perfil médico es predominantemente masculino y se enfoca en la atención secundaria y terciaria. Se notó la fragilidad de las relaciones laborales y la distribución desigual de médicos y especialidades en la red de atención.

DESCRIPTORIOS: Médicos; Atención Primaria de Salud; Recursos Humanos.

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INTRODUÇÃO

The historical evolution of health policies is directly related to the political-social and economic evolution of Brazilian society, which obeyed the perspective of capitalism, with health never having a prominent place in state policy.⁽¹⁾

The Sanitary Reform was a movement driven by civil society, where health professionals, students, teachers, public health workers and ordinary people led a struggle for change beyond sectoral reform and above all a struggle for citizenship. The Unified Health System (SUS), the result of this struggle and instituted by the Federal Constitution of 1988, changed the Brazilian health framework by being based on the principle of health as a citizen's right and a duty of the State.⁽²⁾

In addition to the affirmation of health as a right, the SUS has universality, equity and comprehensive care as its basic principles. Integrality can be understood as an articulated and continuous set of preventive and curative actions and services, individual and collective, required for each case at all levels of complexity of the system.⁽³⁾

In the organization of the SUS, the set of actions and health services articulated at levels of increasing complexity, with the purpose of guaranteeing the integrality of health care, is called the Health Care

Network (HCN). In the HCN, the services are distributed in three levels of care: primary, secondary and tertiary; and this organization is a strategy to overcome the fragmented model of operating health care and management.⁽⁴⁾

In the midst of the cultural, economic and social diversities that permeate a country of continental dimensions like Brazil, inter- and intra-regional inequalities are visible in different ways, with the field of health being one of these possibilities. The crisis in this sector is present in everyone's routine, being widely publicized in the media through news that emphasize frequent queues at health services, shortage of hospital beds, corruption in the funds allocated to health actions and services, low amounts paid for medical and hospital procedures, lack of professionals, among others.

In 2011, a survey carried out by the Institute for Applied Economic Research (IPEA - Instituto de Pesquisa Econômica Aplicada), with more than two thousand people from all regions of the country, pointed out that 57.9% of them reported the lack of doctors as the most serious problem in the SUS.⁽⁵⁾ On the other hand, the Federal Council of Medicine (CFM - Conselho Federal de Medicina) reveals that Brazil has enough active doctors to meet the needs of the population, and that, in five years, the total number of professionals grew by 21.03%.⁽⁶⁾

With the increase in the Brazilian medical population, the ratio of physicians per group of 1,000 inhabitants increased from 1.93 in 2013 to 2.24 in 2018, bringing the national indicator closer to that of countries such as South Korea (2.2), Mexico (2.3), Japan (2.4) and Poland (2.5).⁽⁶⁾

The discrepancy in access to health services, caused by the lack and poor geographical and social distribution of health professionals, especially doctors, has been identified as a serious problem, ingrained over time and resistant to the most varied strategies adopted to combat it in most nations. In general, geographical regions that are difficult to access and segments of the population that live on the margins of society, facing problems such as poverty and lack of protection, are more vulnerable to care insecurity caused by the insufficiency of health professionals. When combined with other socioeconomic disadvantages and situations of high health demands, the shortage of health professionals exacerbates the state of essential deprivation that can affect such populations.⁽⁷⁾

The arrangement of the number of doctors per inhabitant in each territory directly influences the population's quality of life, since these professionals are the main providers of health services. However, the geographic distribution of physicians does not always coincide with the distribution considered socially adequate. In this scena-

rio, it is often observed that, even with an adequate doctor/inhabitant relationship in a country, the distribution of these professionals in their territory tends to be concentrated in certain regions, promoting a socially undesirable result.⁽⁸⁾

Be that as it may, for all cases, the identification of geographic areas and populations that suffer from shortages or severe shortages of health professionals, especially in primary care, and the determination of their intensity, it is a necessary condition for the implementation of public policies aimed at promoting a minimum of care security within the scope of the SUS.

Therefore, the objective of this study was to analyze the medical demography of a municipality in the interior of Brazil, based on data from the National Registry of Health Establishments (CNES - Cadastro Nacional de Estabelecimentos de Saúde).

METHODS

This is a descriptive study with data collected from the CNES referring to the municipality of Aparecida de Goiânia - Goiás, carried out between October and December 2020.

The CNES aims to be the basis for operationalizing Health Information Systems, which are essential for an effective and efficient management of the SUS. The idea is to automate the entire process of data collection carried out in the states and municipalities on the physical capacity installed, the services available and professionals linked to health establishments, family health teams, subsidizing all levels of management, with nationwide data for the purpose of planning health actions. Its objective is to give transparency to society, through the website, of the entire infrastructure of health services as well as the existing and available installed capacity in the country.⁽⁹⁾

Aparecida de Goiânia is located in the metropolitan region of Goiânia and has a high population growth, according to the Brazilian Institute of Geography and Statistics (IBGE - Instituto Brasileiro de Geografia e Estatística), in 2010, 455,657 inhabitants and in 2020 an estimated po-

pulation of 590,146 inhabitants. According to the Municipal Health Department (SMS - Secretaria Municipal de Saúde), the municipality has a total of 56 places of

do), 01 Municipal Clinical Center (CCM - centro clínico municipal), 01 Mental Health Care Center (NCSM - núcleo de cuidados em saúde mental), 01 Emergency Mental Health Service, 01 Municipal Hospital, 01 Municipal Outpatient Clinic, 04 Psychosocial Care Centers (CAPS - Centros de Atenção Integrada à Saúde), 2 Care Centers Integrated to Health (CAIS - Centros de Atenção Integrada à Saúde), 03 emergency care units (UPA - unidades de pronto atendimento) and 01 state emergency hospital.⁽¹⁰⁾

For the operationalization of the research data collection, two searches were carried out in the CNES to extract information according to the objective of the study, on medical professionals and health units in the municipality, with the following flows: 1. CNES > Inquiries > Establishments > Extraction > State of Goiás > Municipality Aparecida de Goiânia > Current Competence > Management - All > Download; 2. CNES website > Consultations > Professionals > Extraction > Type of Management - All > State of Goiás > Municipality of Aparecida de Goiânia > Current Competency > Download.

From the generated lists, the following data were collected: from establishments (identification; type of service; customer flow; establishment classification) and from medical professionals (identification; gender; specialty; bond type; workload and type of establishment to which they are linked).

After knowing the total number of physicians, the relationship between the number of these professionals and the population of the municipality (estimated population) was constructed, using the following formula: number of doctors in the public network / total population X 1,000. In this way, we obtained the doctor/per inhabitant ratio of the municipality.

As it is a study based on secondary data that are available in the public domain, this study waived submission to an Ethics Committee for Research on Human Beings in accordance with Resolution No. 510/2016. However, the authors observed all the ethical precepts necessary for the

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assistance in the RAS, which are divided into: 39 basic health units (UBS), 01 maternity hospital, 01 specialized care service (SAE - serviço de atendimento especializa-

analysis and dissemination of results.

RESULTS

According to the CNES, Aparecida de Goiânia has a total of 1,562 physicians, of which 934 (59.8%) are male, representing the majority of professionals in the municipality. Taking into account the total number of doctors, including those who work in partnership with the SUS in the private network, the doctor/inhabitant ratio in the municipality was 2.65 doctors for every thousand inhabitants.

Table 1 presents some characteristics of the distribution of physicians and specialties in the municipality. When analyzing the specialties of physicians in the public network, a total of 54 specialties were found, of which eight were offered exclusively in public health services under direct administration, while 11 were only offered in the private network in agreement with the SUS. The rest of the 35 specialties were offered to the population both in public and private services.

Regarding the division of these specialties into clinical or surgical, it was found that 45 (83.3%) of them were considered clinical, with emphasis on the distribution of doctors between general practice and family medicine, which together accounted for 517 professionals providing services to the municipal network.

Regarding the workload of professionals, both outpatient and hospital, performed by each specialty, general practitioners and ESF professionals stood out, totaling 13,257 hours worked per month.

As for the number of primary care physicians in the municipality, 141 professionals were found, the majority (58.8%) being female, distributed in six specialties: internal medicine (24), family health (102), gynecology and obstetrics (5), pediatrics (9), dermatology (1) and psychiatry (1).

These 141 medical professionals were responsible for caring for the entire population of the municipality of Aparecida de Goiânia. Thus, the physician/inhabitant ratio in primary care was 0.24 physicians per thousand inhabitants.

Table 1: Distribution of doctors and specialties in the municipality of Aparecida de Goiânia, 2020.

Variables	N	%
Gender		
Female	628	40,2
Male	934	59,8
Specialities		
Clinical	45	83,3
Surgical	09	16,7
Level of attention		
Primary	41	60,0
Secondary	23	34,0
Secondary /Tertiary	04	06,0
Type of establishment		
Public	68	54,4
Private	57	45,6

Source: the authors, 2020

The population served in primary care consists of babies, children, adolescents, adults and the elderly. Thus, analyzing the care provided to the child population aged less than or equal to 14 years, there are 9 pediatricians available and a population of 139,147 inhabitants in this group, resulting in a pediatrician/inhabitant ratio of 0.06 pediatricians for every 1,000 children, or one pediatrician for every 15,460 children.

Assuming the elderly population as a reference, and having found 4 geriatricians in the RAS, a ratio of 1 geriatrician for each group of 13,420 elderly people was established (0.07 doctors/1,000 elderly people).

Contrary to the data from the SMS in Aparecida, the search in the CNES pointed to 68 public health establishments in the municipality and 57 private establishments in agreement with the SUS. Regarding the doctors who worked in these places, 1,024 attended only through the public system, 466 only privately and 72 provided care in both areas.

Considering public establishments, Basic Health Units (UBS), belonging to the primary care level, corresponded to 60.0% of the total. The secondary level, on the

other hand, totaled 23 (34.0%) establishments, comprising services such as multi-professional outpatient clinics, clinical centers, school clinics, mental health services, emergency care units (UPA), Integrated Health Care Centers (CAIS - Centros de Atenção Integrada à Saúde), Specialized Assistance Service (SAE) and a Home Care Service (SAD - Serviço de Atenção Domiciliar). Finally, establishments that had a dual character of care, mixing secondary and tertiary services, represented 6% of the total, with representatives of this group being large hospitals, maternity hospitals and rehabilitation centers.

When considering the distribution of professionals by levels of care, the primary level concentrated 141 doctors and the secondary level included 460 doctors (51.3% female and 48.7% male) in 33 specialties, ranging from acupuncture to clinical oncology (Table 2).

The establishments that offer secondary and tertiary levels simultaneously covered 1058 physicians (66.3% male) in 48 specialties, such as clinical (182 physicians), anesthesiology (137 physicians), general surgery (95 physicians), gynecology and obstetrics (94 physicians), ophthalmology

(81 physicians), radiology and diagnostic imaging (75 physicians), orthopedics and traumatology (70 physicians), cardiology (57 physicians), pediatrics (50 physicians), neurosurgery (39 physicians), psychiatry (32 physicians), intensive care medicine (24 physicians), neurology (22 physicians), nephrology (21 physicians), otolaryngology (21 physicians), vascular surgery (15 physicians), angiology (14 physicians), urology (14 physicians), cardiovascular surgery (13 physicians), and other areas (102 physicians) (Graph 1).

It was found that 81 professionals were governed by statutory employment. The non-statutory type bond encompassed a total of 1,854 contracts, of which 1,165 were directly linked to the SUS and 689 to the private health insurance network. Among the professionals linked to the SUS, the contracts encompassed the following types of employment: self-employed (08), scholarship holders (62), commissioned (02), CLT workers (234), contracted for a fixed period (767), public employees (06), trainees (02), contracts for individuals (74), contracts for legal entities (01) and residents (09).

Finally, there was a great diversity of possibilities regarding the workload exerted by SUS professionals, since most work on duty, with scales carried out during business hours or on a rotating basis, which changes according to the employment contract.

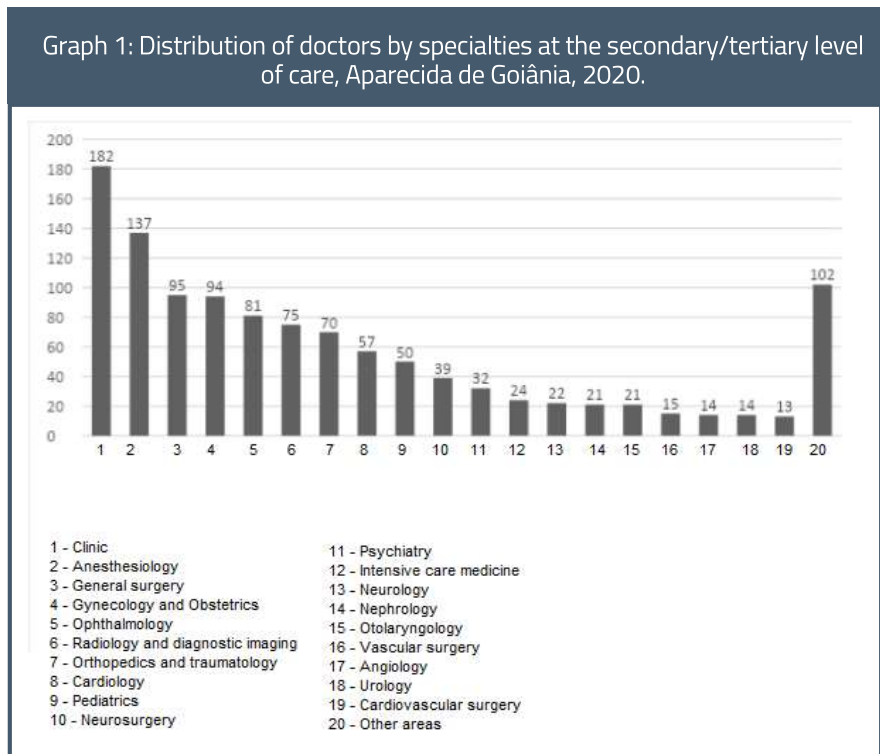
DISCUSSION

The Medical Demography in Brazil 2020 study, carried out by the Department of Preventive Medicine of the Faculty of Medicine of the University of São Paulo (FMUSP) and the Federal Council of Medicine, revealed the enormous challenge of the availability of doctors in Brazil. Despite the country having reached the historic mark of 500,000 doctors, the biggest public health crisis in recent history, caused by the COVID-19 pandemic, highlighted the weaknesses in the provision of services, and how fundamental is the existence of doctors in sufficient numbers and well distributed, to meet the health needs of the

Table 2 - Distribution of doctors by specialties at the secondary level of care, Aparecida de Goiânia, 2020.

Specialties	N	%
Clinical	286	62,2
Psychiatry	23	5,0
Gynecology and Obstetrics	22	4,8
Pediatrics	21	4,5
Orthopedics and traumatology	19	4,1
Dermatology	12	2,6
General surgery	08	1,7
Otolaryngology	08	1,7
Cardiology	07	1,5
Neurology	07	1,5
Gastroenterology	06	1,3
Nephrology	06	1,3
Rheumatology	06	1,3
Others	37	8,0

Source: the authors, 2020.



population. ⁽¹¹⁾

Medical demography is a dynamic process, influenced by behavior and profes-

sional choices. The disparities in the distribution of health professionals between rural and urban areas, and between capitals and

countryside, with emphasis on medical professionals, it is one of the impasses of the health sector in the world, due to the difficulty of retaining doctors in the most vulnerable and remote areas. In Brazil, a country of continental dimensions, in addition to these same discrepancies between rural and urban areas, and capitals and countryside, inequality in the distribution of doctors and medical schools between regions is also well established and mapped, with a higher concentration prevailing in the Southeast and South regions.⁽¹²⁾

In 2020, Brazil had the highest number and the highest density of doctors ever recorded, with a ratio of 2.38 doctors for every 1,000 inhabitants. When analyzing the total number of doctors who provide services for the SUS in Aparecida de Goiânia, it was identified that the municipality has a number above the national and state average, the latter presenting a ratio of 2.28 doctors/thousand inhabitants.⁽¹¹⁾ It should be noted that the calculation of the physician-inhabitant ratio at the national and state levels considers the total number of physicians, while the analysis performed in the present study considered only physicians who provided services to the SUS.

Although the World Health Organization (WHO) does not have a specific parameter, the Federal Government uses as a reference the proportion found in the United Kingdom (2.7 doctors per thousand inhabitants), because it is a place with the second largest universal health system in the world, oriented by primary care, second only to Brazil.⁽¹³⁾

The availability of qualified, motivated health professionals, in sufficient numbers and allocated where they are needed, with good working conditions is a key factor in the management process and delivery of health services in Brazil.⁽¹⁴⁾

The term feminization in the labor market normally refers to a clear growth of the female population in some professions that were historically performed by men. Initially, at the end of the 19th century, female professionalization was related to traditional female roles, that is, women linked to caring, educating and serving, un-

derstood as a gift or vocation.⁽¹⁵⁾

Over the last few decades, the gender difference that for centuries prevented women from entering the medical profession has been modified through the achievements of women's rights. From a profession that until then had the predominance of performance by male hands, medicine becomes a profession in which the majority of new graduates are women.⁽¹⁶⁾ However, the number of men is still higher among physicians working in Brazil, but this gender-related difference is increasingly decreasing.⁽¹¹⁾ The present study reflected this trend by showing the predominance of women in the PHC scope, however, in the general context, men still represented the majority of the contingent of medical professionals.

With regard to medical specialties, it should be noted that there are numerous factors that weigh when medical students make the decision as to which specialty to pursue. The decision is influenced by components such as personality, lifestyle and previous experiences in the desired specialty.⁽¹⁷⁾

Unfortunately in medicine, gender discrimination is still experienced in some specialties, highlighting the surgical areas, in which most surgeons claim to have sexism and prejudice, both on the part of patients and co-workers.⁽¹⁸⁾ In this sense, it was observed that in the municipality of Aparecida de Goiânia, women are also minorities in surgical specialties, and on the other hand, the female presence in three specialties was remarkable: pediatrics, family health and gynecology/obstetrics, as well as in the national scenario, in which the greater participation of women in specialties related to primary health care is notorious. Therefore, this underrepresentation of women in some specialties, especially in the surgical areas, and the greater representation in pediatrics and primary care, raises a concern about the future of certain specialties.⁽¹⁹⁾

In the present survey, some areas stood out, such as Internal Medicine, Anesthesiology, Orthopedics and Traumatology, Cardiology, Ophthalmology and Radiology/Diagnostic Imaging, which amounted to 70.7% of all specialist titles in the city,

corroborating the national scenario, where the same specialties represent 63.6% of all titles in the medical field.⁽¹¹⁾ The data demonstrate the unequal division of professionals among the medical specialties existing in the municipality, which can result in queues for care depending on the specialty, implying a burden on the population and overloading the health system.

The number of rheumatologists in Brazil is an example that shows this inequality in the division of physicians between specialties. A relative scarcity of these specialists is observed, even in the capitals, which culminates in difficulties in accessing this service. Although there is no universally recognized methodology for estimating the ideal doctor/inhabitant ratio, the Royal College of Physicians, in the United Kingdom, assumes the ideal ratio of one rheumatologist for every 86,000 inhabitants.⁽²⁰⁾ Taking this proportion as a starting point for comparison with the municipality of Aparecida de Goiânia, the physician/inhabitant ratio found is below that proposed by the Royal College of Physicians, reaching a ratio of approximately one rheumatologist for every 98,000 inhabitants.

In addition to this inequality between specialties, there is a poor distribution of doctors throughout the Brazilian territory, with emphasis on the shortage of doctors in Primary Health Care (PHC).⁽²¹⁾ To solve this problem, which is an obstacle to the universalization of access to health, there have been, over time, several initiatives to attract and retain professionals in this area in remote regions, such as the Program for Internalization of Health and Sanitation Actions (PIASS - Programa de Interiorização das Ações de Saúde e Saneamento), Program for Valuing Primary Care Professionals (PROVAB - Programa de Valorização dos Profissionais da Atenção Básica) and the Mais Médicos Program (PMM - Programa Mais Médicos). Among all the initiatives, the one with the greatest success and impact on vulnerable areas was the PMM.⁽²²⁾ Implemented in 2013 in Brazil, the PMM aims to reduce inequalities in access to PHC. However, despite having reduced the shortage of doctors in vulnerable

areas, this inequality of distribution is still a reality in the country today.⁽²¹⁾

Primary Care is the main gateway to the SUS. It constitutes the set of individual, family and collective health actions, involving promotion, prevention, protection, diagnosis, treatment, rehabilitation, harm reduction, palliative care and health surveillance, and is carried out by a multidisciplinary team. In addition, Primary Care is responsible for ordering the flows and counter-flows of people within the Health Care Network (HCN), in addition to having the duty to be resolute, being able to solve most of the population's health problems, referring the user to other points in the network, when necessary.⁽²³⁾ In view of this, the importance of the level of primary care is relevant so that the Brazilian population can have a dignified and healthy life.

The Family Health Team (eSF - Equipe de Saúde da Família) is the priority health care strategy, considered as a means of expanding, qualifying and consolidating Primary Care. This team is composed at least by a doctor, a nurse, preferably both specialists in family and community health; nursing assistant and/or technician and community health agent. The National Primary Care Policy (PNAB - Política Nacional da Atenção Básica) establishes that each eSF must have an enrolled population of 2000 to 3500 people, remembering that this number may vary upwards or downwards according to vulnerabilities, risks and community dynamics.⁽²³⁾ The city of Aparecida de Goiânia has an estimated population of 590,160 inhabitants and 102 doctors from the Family Health Strategy. However, data from the municipality's SMS indicate only 89 approved Family Health Strategy (ESF) teams, which results in a coverage of 60.3% of the population by the ESF. Although the ratio of doctors per inhabitant in the city is satisfactory and higher than in Brazil, an important percentage of the territory is discovered by the FHS.

The study also highlighted the fragility of employment relationships when it comes to the health field, especially in the medical profession, characterized by the multiplicity of links, the accumulation and simulta-

neity of works. In Aparecida de Goiânia, the medical staff that integrates the public health system is predominantly composed

Unfortunately in medicine, gender discrimination is still experienced in some specialties, highlighting the surgical areas, in which most surgeons claim to have sexism and prejudice, both on the part of patients and co-workers.

of professionals linked to the non-statutory regime, with precarious contracts and non-compliance with labor rights. The unstable or temporary work relationship is seen as

an adverse factor to assistance.⁽²⁴⁾

The accumulation of services is a constant in the life of Brazilian medical professionals. In Ceará, of the 7,008 doctors linked to the State, 3,751 (53.5%) had between two and four jobs, and 39 (0.6%) had between 11 and 20 jobs.⁽²⁵⁾

As for the doctor's working hours, this is defined as the time in which he is available for his professional practice, being measured by the number of hours worked in a typical week, plus the various work relationships and occupations reported.⁽¹¹⁾ In this study, the combined weekly workload of professionals was about twice as high in an outpatient setting compared to a hospital setting. Furthermore, at the national level, it is possible to notice an overload of hours among physicians, which occurs due to their poor distribution, the imbalance in the composition of health teams and professional disqualification in public health and health management. Thus, this greater burden in the workload performed by health professionals leads them to alarming work situations, in which physical and emotional capacity is exhausted and, consequently, the quality of health care is compromised.⁽²⁶⁾

The results presented may serve to better understand the medical demography in the city of Aparecida de Goiânia, distribution of professionals, specialties with a greater number of doctors and possible deficits in the care network. Along with other surveys in the area, you can collaborate with managers to optimize the organization of services.

CONCLUSION

The physician/inhabitant ratio in the municipality of Aparecida de Goiânia is relatively good, showing that it is compatible with other countries such as the United Kingdom, Canada and the United States. Most physicians in the municipality were male and linked to secondary and tertiary care levels. It was possible to perceive the fragility of employment relationships in the municipality and the inequality in the distribution of the number of professionals

and specialties in the network.

As limitations of the present study, we can point out those specific to research based on secondary data, referring to the quality of filling in the data and feeding the information systems. In addition, as the hiring of medical professionals has a

high turnover, the data may not faithfully represent the current scenario of the workforce. On the other hand, we highlight as a strong point that this is the first study in Goiás that proposed to know the medical demography of a municipality based on data from the CNES.

It is hoped that other works, which relate the profile of professionals to local demands, can be developed and thus collaborate for future adjustments in the hiring and allocation of doctors, as well as in the improvement of care provided to the population.

REFERENCES

- Polignano MV. História das políticas de saúde no Brasil: uma pequena revisão. *Cad Internato Rural FM/UFMG*. 2001;35(1):1-35.
- Paim JS, Travassos CMR, Almeida CM, et al. O sistema de saúde brasileiro: história, avanços e desafios. *Lancet*. 2011; 11:60054-8.
- Brasil. Lei n. 8.080 de 19 de setembro de 1990. Lei Orgânica da Saúde. *Diário Oficial da União*. 1990:18.055.
- Brasil. Ministério da Saúde. Decreto 7.508 de 28 de junho de 2011. Regulamenta a Lei nº 8.080 de 19 de setembro de 1990. *Diário Oficial da União*. 2011; Seção 1.
- Carneiro F. Falta de médicos é o principal problema do SUS, mostra Ipea. *G1 Brasil*. 2011 Fev 09. Disponível em: <http://glo.bo/epAxQI>
- CFM. Conselho Federal de Medicina. Demografia médica: Brasil possui médicos ativos com CRM em quantidade suficiente para atender as demandas da população. 2018 Nov 26. Disponível em: <https://portal.cfm.org.br/noticias/demografia-medica-brasil-possui-medicos-ativos-com-crm-em-quantidade-suficiente-para-atender-demandas-da-populacao/>
- Girardi SN, Carvalho CL, Araújo JF, et al. Índice de escassez de médicos no Brasil: estudo exploratório no âmbito da Atenção Primária. O trabalho em Saúde: abordagens quantitativas e qualitativas. Rio de Janeiro: Cepesc/IMS/UERJ, ObservaRH. 2011:171-86.
- Póvoa L, Andrade MV. Distribuição geográfica dos médicos no Brasil: uma análise a partir de um modelo de escolha locacional. *Cad Saúde Pública*. 2006;22(8): 1555-64.
- Banco de dados do Sistema Único de Saúde - DATASUS, Cadastro Nacional de Estabelecimentos de Atenção à Saúde - CNES. Brasil, Ministério da Saúde. 2000 - [citado 12 Fev 2020]. Disponível em: http://cnes.datasus.gov.br/Mod_Lnd_Clientela.asp
- Secretaria Municipal de Saúde. Prefeitura de Aparecida. Unidades de Atendimento. Disponível em: <http://saude.aparecida.go.gov.br/unidades-de-atendimento/>
- Scheffer M, Cassenote A, Guerra A, et al. Demografia Médica no Brasil 2020. São Paulo, SP: FMUSP, CFM. 2020;312 p. ISBN: 978-65-00-12370-8.
- Silveira RP, Pinheiro R. Entendendo a necessidade de médicos no interior da Amazônia-Brasil. *Rev. bras. educ. med*. 2014;38(4):451-9.
- Ministério da Saúde (BR). Pacto Nacional pela Saúde Mais Médicos. [Internet]. Brasília: Ministério da Saúde; 2016 [citado 20 Jun 2021]. Disponível em: http://bvsm.s.saude.gov.br/bvs/publicacoes/pacto_nacional_saude_mais_medicos.pdf
- Oliveira APC, Gabriel M, Dal Poz MR, et al. Desafios para assegurar a disponibilidade e acessibilidade à assistência médica no Sistema Único de Saúde. *Ciênc. Saúde Colet*. 2017;22(4):1165-80.
- Matos IB, Toassi RFC, Oliveira MC. Profissões e ocupações de saúde e o processo de feminização: tendências e implicações. *Athenea digital*. 2013;13(2):239-44.
- Ávila RC. Formação das mulheres nas escolas de medicina. *Rev. bras. educ. med*. 2014;38(1):142-9.
- Watte G, Manfroi WC, Machado CLB, et al. Componentes determinantes na escolha da especialização em novos profissionais médicos. *Rev. bras. educ. med*. 2015;39(2):193-5.
- Paulo D, Assis MS, Kreuger MRO. Análise dos fatores que levam mulheres médicas a não optarem por especialidades cirúrgicas. *Rev Med (São Paulo)*. 2020;99(3)230-5.
- Soares FJP, Leite JA, Melo MC, et al. Tendência histórica de feminização em curso médico brasileiro. *CIAIQ2019*. 2019;2: 206-13.
- Albuquerque CP. Inequalidade na distribuição de reumatologistas no Brasil: correlação com local de residência médica, Produto Interno Bruto e Índice de Desenvolvimento Humano. *Rev. Bras. Reumatol*. 2014;54(3):166-71.
- Girardi SN, Stralen ACS, Cella JN, et al. Impacto do Programa Mais Médicos na redução da escassez de médicos em Atenção Primária à Saúde. *Ciênc. Saúde Colet*. 2016;21(09):2675-84.
- Oliveira FP, Vanni T, Pinto HA, et al. Mais Médicos: um programa brasileiro em uma perspectiva internacional. *Interface (Botucatu)*. 2015;19(54):623-34.
- Ministério da Saúde (BR). Portaria nº 2.436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS) [Internet]. Brasília: Diário Oficial da República Federativa do Brasil; 2017 [citado 20 Jun 2021]. Disponível em: https://bvsm.s.saude.gov.br/bvs/saudelegis/gm/2017/prt2436_22_09_2017.html
- Trevisan ER, Castro SS, Camargo FC, Santos NTO, Pereira GA, Silva KS. Inquérito sobre proteção ocupacional e perfil dos trabalhadores de hospitais regionais de referência para a COVID-19. *Rev Saude Coletiva*. 2022;12: 9545-51.
- Maciel RH, Santos JBF, Sales TB, et al. Multiplicidade de vínculos de médicos no Estado do Ceará. *Rev Saúde Pública*. 2010;44(5):950-6.
- Dal Poz MR. A crise da força de trabalho em saúde. *Cad Saúde Pública*. 2013;29(10):1924-6.