DOI: 10.1590/1809-2950/14662023032016

ORIGINAL RESEARCH

Family Health Support Center: Impact on Ambulatory Care Sensitive Conditions

Núcleos de Apoio à Saúde da Família: impactos nas internações por causas sensíveis à atenção básica

Centros de Apoyo a la Salud de la Familia: impactos en las hospitalizaciones por causas sensibles a la atención primaria

Patrícia Garmus de Souza Moretti[1], Elenir Fedosse[2]

ABSTRACT | The Family Health Strategy is the preferred admittance of the Brazilian Unified Health System (SUS) and relies on Family Health Support Centers (FHSC) to reduce referrals to secondary care, as it seeks to reduce Ambulatory Care Sensitive Conditions (ACSC). This study analyzed the growth of FHSC and its impact on the number of ACSC. This is an exploratory, descriptive and quantitative study, conducted between 1998 and 2016, based on the database of the Department of Primary Care of the Brazilian Unified Health System (SUS). An expansion of the family health teams all over Brazil was identified: 40,490 teams were established in 5,483 municipalities, covering 64.2% of the population. The number of FHSC at the Northeast and the population coverage was higher in relation to other regions. The highest decrease of ACSC occurred in the Midwest, which has a minor number of FHSC established. The Northeast had the highest number and coverage of FHSC; however, a proportional reduction of ACSC did not happen. The largest number or FHSC coverage has still not influenced the reduction rate of ACSC in the most vulnerable populations within the context of social determinants.
Keywords | Brazilian Unified Health System; Family Health; Family Health Strategy; Primary Health Care; Public Health.

RESUMO | A Estratégia Saúde da Família é a porta de entrada preferencial do Sistema Único de Saúde (SUS) e conta com os Núcleos de Apoio à Saúde da Família (NASF) para redução de encaminhamentos à atenção secundária, buscando diminuição das Internações por Condições Sensíveis à Atenção Básica (ICSAB). Este estudo analisou o crescimento dos NASF e seus impactos no número de ICSAB. Trata-se de um estudo exploratório, descritivo e quantitativo, realizado entre 1998 e 2016, baseado no banco de dados do Departamento de Atenção Básica do SUS. Constatou-se expansão das equipes de saúde da família no Brasil: 40.490 foram implantadas em 5.483 municípios, cobrindo 64,2% da população. Os números dos NASF no Nordeste e a cobertura populacional foram maiores em relação às demais regiões. Ocorreu maior queda de ICSAB na região Centro-Oeste, que possui menor número de NASF implantados. O Nordeste contou com o maior número e cobertura de NASF, no entanto, não se concretizou redução proporcional de ICSAB. O maior número ou cobertura de NASF ainda não impactou na redução de taxas de ICSAB em populações mais vulneráveis dentro do contexto de determinantes sociais.
Descritores | Sistema Único de Saúde; Saúde da Família; Estratégia de Saúde da Família; Atenção Primária à Saúde; Saúde Pública.

RESUMEN | La Estrategia Salud de la Familia es la clave de entrada preferencial al Sistema Única de Salud (SUS) y cuenta con los Centros de Apoyo a la Salud de la Familia (CASF) para reducir los casos a la atención secundaria, buscando disminuir las Hospitalizaciones por Causas Sensibles a la Atención Primaria (HCSAP). En este texto se evalúa el crecimiento de los CASF y sus impactos en la cantidad de HCSAP. Se trata de

[1]Physiotherapist, Master in Human Communication Disorders. Federal University of Santa Maria (UFSM) – Santa Maria (RS), Brazil.
[2]Professor PhD of the Graduate Program in Human Communication Disorders at UFSM – Santa Maria (RS), Brazil.

Mailing address: Patrícia Garmus de Souza Moretti – Rua Teixeira Soares, 1.502/104 – Passo Fundo (RS), Brazil – CEP: 99010-081 – E-mail: patricia.garmus@gmail.com –
Financing source: Nothing to declare – Conflict of interest: Nothing to declare – Presentation: Nov. 2015 – Accepted for publication: Oct. 2016– Approved by Ethics Committee: 30652514.3.0000.5346.

un estudio exploratorio, descriptivo y cuantitativo, llevado a cabo entre 1998 y 2016, empleando la base de datos del Departamento de Atención Básica del SUS. Se verificó que hubo una expansión de los equipos profesionales de salud de la familia en Brasil: se crearon 40.490 en 5.483 municipios, llegando a la cobertura de 64,2% de la población de este país. La cantidad de los CASF en la región Nordeste del país y la cobertura a la población fueron más grandes que en las otras regiones. Ya el descenso en las HCSAP ha sido más grande en la región Centro-Oeste, que cuenta con menor cantidad de CASF creados. A pesar de que la región Nordeste tenga más cantidad y cobertura de CASF, no redujo proporcionalmente las HCSAP. La mayor cantidad o cobertura de los CASF no redujo las tasas de HCSAP en las poblaciones más vulnerables en el ámbito social.

Palabras clave | Sistema Único de Salud; Salud de la Familia; Estrategia de Salud de la Familia; Atención Primaria a la Salud; Salud Pública.

INTRODUCTION

In Brazil, Primary Care (PC) is the first point of health care and the main admittance in the Brazilian Unified Health System (SUS), hierarchically arranged in primary, secondary and tertiary levels. It is characterized by a set of actions related to health in the individual and collective context, which includes promotion and protection of health, prevention of diseases, diagnosis, treatment, rehabilitation, harm reduction and thehealth maintenance with the aim of developing a comprehensive care to improve health status and autonomy of people and the conditions and determinants of people's health[1].

It should be noted that, in the national and international literature, the terms Primary Care (PC) and Primary Health Care (PHC) appear as synonyms. However, the Brazilian Ministry of Health (MH) uses PC to define, in the SUS context, the Family Health (FH) as its main way of primary care in health[2,3]. The Family Health Strategy (FHS) is a priority in the National Policy of Primary Care and is intended to expand, qualify and consolidate primary care in health.

The FHS promotes reorientation of the work process of basic health unit teams, with greatest potential to deepen the principles, guidelines and the fundamentals of PC, extending the resolution and the impact on the health situation of people and collectivities, besides providing an important cost-effectiveness relation[1,4].

In 2008, the Family Health Support Centers (FHSC) were created with the objective of extending and supporting (by matricial practice) the actions of the FHS teams[5], to reduce indiscriminate referrals to the secondary level. The physical therapist is one of the professionals who can integrate FHSC and, like other experts who can be part of these teams[6], must supply the community's demand . The role of the physical therapist is to reduce damage and aggravations, with integral practice to health, with health education, conduct individual and group attendance and conduct home visits. Therefore, the profession is not related only to a rehabilitation job[7].

Among the outcomes from the activities of the physiotherapist in PC is the reduction of Ambulatory Care Sensitive Conditions (ACSC)[7,8]. Sensitive Diseases to PC are diseases whose morbidity and mortality can be reduced by opportune and efficient primary care[8,9]. ACSC are understood as hospitalizations caused by infectious diseases preventable by immunization, complications that could be reduced by early diagnosis and treatment, acute complications from non-transmissible diseases. In this way, it is expected that an effective PC may reduce ACSC, including readmission of patients and stay time at the hospital[8-10]. When the PC does not guarantee sufficient and appropriate access, there is an excessive demand for medium and high complexity levels, with costs and unnecessary displacement[11-13].

This study analyzed the growth of FHSC in Brazil and its impact on the number of ACSC.

METHODOLOGY

This is an exploratory, descriptive and analytical study that used a quantitative approach. It was based on the research entitled "Núcleos de Apoio à Saúde da Família no Brasil: Participação da Fisioterapia e da Fonoaudiologia" [Family Health Support Centers in Brazil: Participation of Physical Therapy and Phonoaudiology] – registered in the Office of Projects

of the Health Science Center of a Federal University in the South region, submitted and approved by the Research Ethics Committee of the same University, with the number 30652514.3.0000.5346.

The data were collected from the website of the Information Technology Department of the Brazilian Public Health System – SUS (DATASUS) –, in the Family Coverage History section[14], in the options: Geographical Unit by Competence between September 1998 and April 2016 for established FHS, and between January 2010 and April 2016 for FHSC. It should be noted that in the DATASUS database there are no records of established FHS before 1998 and of FHSC before 2010.

The data from ACSC were collected from the website of the Inter-agency Health Information Network (RIPSA) of the Brazilian Ministry of Health[15], and the following sections were selected: Region, Period available – 2000 to 2013 (no data available after this year). For the calculation of the FHSC coverage, the population projection in 2016 by region was requested from the Brazilian Institute for Geography and Statistics (IBGE). These data were crossed with the number of FHSC in the same year, and thus we we calculated the amount of FHSC per one million inhabitants.

The data were organized and processed with descriptive statistics, according to the process indicators (FHS and FHSC coverage) and to ACSC outcomes.

RESULTS

We verified that, from September 1998 to April 2016, the number of FHS increased, as well as the population coverage: from 2,668, in 967 municipalities (5.9% coverage), to 40,490 in 5,031 municipalities (64.2% coverage)[16]. In December 2005 (three years before the FHSC creation) there were 1,244 State Foundations in the Northeast, 18 in Southeast, 98 in the South and 40 in the Midwest[6].

Regarding the number of FHSC, the increase was huge: from three FHSC, in 2008[17], to 4,341 in April 2016[18]. It was observed that, in 2010, the Northeast emerged as the leader of established FHSC 1(566), followed by the Southeast (367), South (111), North (86) and Midwest (56). The FHSC 1 has a team that works 200 hours per week. In relation to FHSC 2, in the same year, the Northeast led with 55, followed by the Midwest (38), Southeast (20), North (10) and South (8). FHSC 2 has a team that works 120 hours per week. About FHSC 3, whose implementation started in 2013, the Northeast led again with 160 units, followed by the Midwest and Southeast with 46 units each, the South with 6 units and no units in the North, in that year. FHSC 3 has a team that works 80 hours per week. NoFHSC professional may have a workload under 20 hours.

The Northeast region also presented higher coverage (FHSC/million inhabitants) of FHSC 1 and 2. FHSC 3 showed the highest coverage in the Midwest as shown by Figure 1.

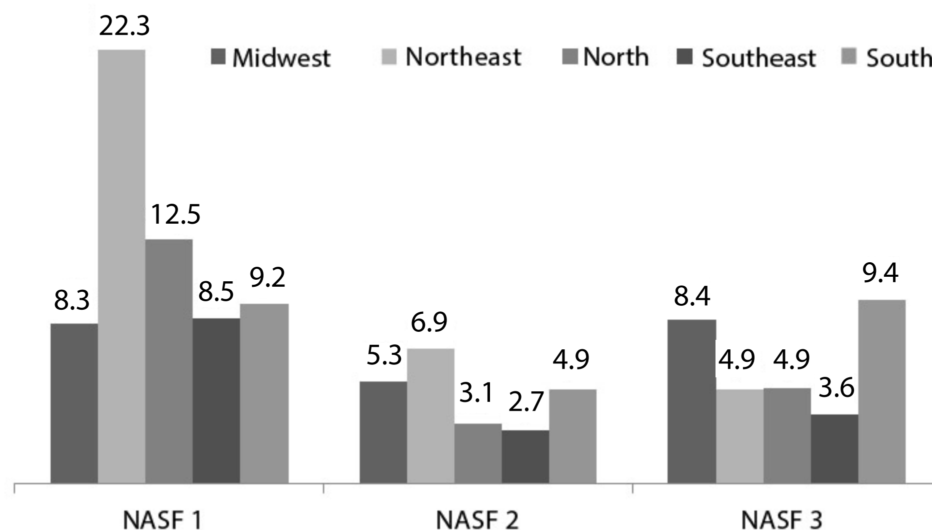

Figure 1. FHSC 1, 2, and 3 coverage by region, until April 2016

Between 2000 and 2016, the region that presented the highest reduction in ACSC rates (number of hospitalizations per 10,000 inhabitants) was the Midwest, with a reduction of 42.5%, followed by the South (37.8%), Northeast (33.1%), Southeast (31.1%) and North (20.6%), as shown in Figure 2.

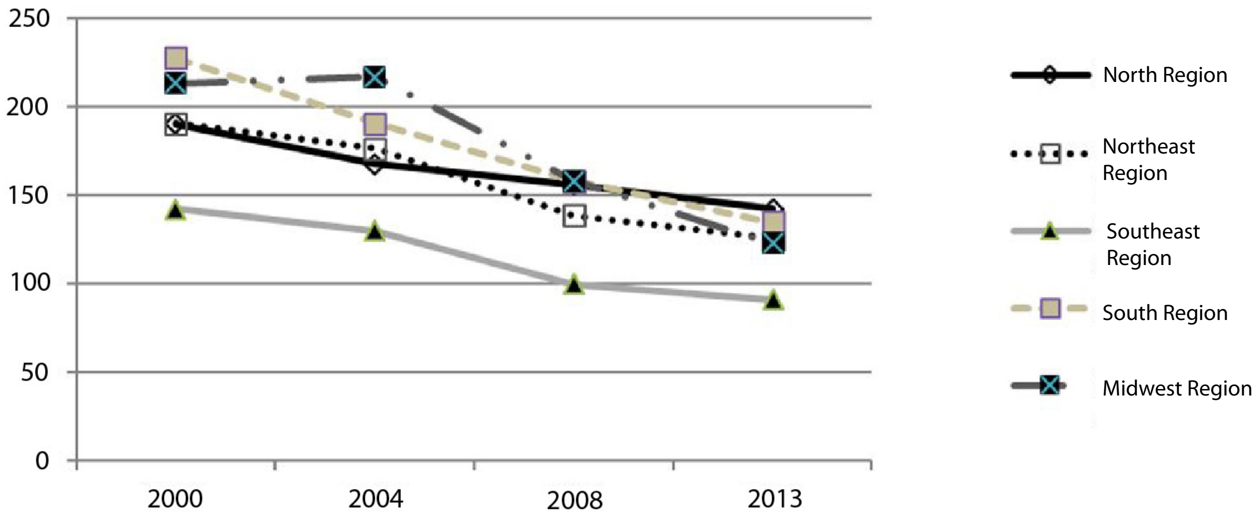

Figure 2. Ambulatory Care Sensitive Conditions rate, from 2000 to 2016, according to regions

DISCUSSION

The FHS distribution in the country, since 1994, occurred from small and medium municipalities to the largest ones, and from the Northeast to other regions. This increase had to do with the transfer of the resources system of the Ministry of Health, since 1996, by Basic Operational Norm (BON), with shared management (financial incentives per population coverage ranges and no longer by production). Before the BON/1996, cities that produced more received more resources, so that the poorest regions, with greater difficulties to implement an efficient assistance network, were punished, creating thus an unequal[19] resource distribution system.

With the approval of the National Policy of Primary Care[1,4,20] in March 2006, the funding was regulated and the fragmentation by population coverage, which disfavored big centers, was overcome. Although the situation of funding inequities has been partially corrected, with the agreed and integrated programming (partial transfer *per capita* of financial resources), it still had operations based on the guidelines of the previous period. The mechanisms for equitable distribution of resources has not exceeded the problems, aggravated by the strong elitist process and concentration of health professionals in the metropolitan regions, in big and medium cities. The cities with the worst economic situation, population with higher lack of resources and more distant from the big centers, suffered with low availability of health workers to supply the population needs[21].

Then, State Foundations were created as a specialized alternative to provide public services[21,22]. Such Foundations presented themselves as alternatives to a more efficient management, aiming at ease civil servants hire, with purchase without bidding or withsimplified process of a bidding, legally, faster and more efficient. The Foundations followed the principles of public administration: legality, impersonality, morality, publicity and efficiency[21-23].

This argument gains strength when the outcomes from the Family Health State Foundation, created in 1996, are analyzed[21,22]. Such Foundation achieved the goal of improving 70% of the workforce by hiring workers for the SUS, ensuring new professionals team via civil service competitive examination, thus expanding family health teams. This enabled the establishment of FHSC 1 and 2, which should have strengthened local PC, influencing ACSC[21,22,23].

Although all regions of Brazil have received the same instructions and the same financial incentives for the establishment of FHSC[24], the largest increase of these centers was observed in the Northeast region[22,23]

(Figures 1 and 2). This region has not very populous cities (Salvador: 2,921,087 million; Recife: 1,617,183 million) compared to cities in the Southeast (São Paulo: 11,967,825 million and Rio de Janeiro: 6,476,631 million)[25], where the possibilities for deploying FHSC 1 and 2 would be higher, due to the relation of these centers with the number of FHS. The increase of FHSC in the Northeast may happened due to several factors, among them, the strategic direction of health actions for the poorest, and the public policy programs to fight against poverty such as the *Bolsa Família* Program – BFP)[26].

According to the 2014 United Nations Development Programme (UNDP)[27], the BFP has reduced child mortality and contributed, in particular, to reduce deaths due to poverty such as malnutrition and diarrhea[26] (diseases that can be effectively treated by PC)[27,28]. The program had an impact on health services and in the work dynamics of professionals. The Strategic Agenda for Health in Brazil indicates improvement guidelines of actions and services directed to the population, with guaranteed access to quality health services.

One of the strategies identified is the articulation between the BFP and FHS, considering eligibility parameters for aggravations and diseases and the need to ensure, in the short term, access to promotion actions and healthcare of lower income families. BFP promotes vaccination, monitoring of nutritional status, prenatal care, services also present in FHS. The increased demand for health services generates a higher growth of FHS and, as a consequence, higher demand for FHSC. This may explain the highest increase of FHSC in the Northeast, where there is a high number of BFP's beneficiaries[29]. Historically, the Northeast was the region with the highest concentration of poverty in the country and, although inequities of access to education and services have been reduced, there is still an impact on the population's health of this region, especially concerning infectious and preventable diseases, which directly affects ACSC[28,30].

Despite the Midwest region presenting the lowest number of FHSC and, however, have presented reduced rates of hospitalization, it is difficult to compare it to the Northeast. The two regions have different social, health, economic, geographic, cultural, psychological, and behavioral determinants that influence the occurrence of health problems in each region, as well as its risk factors in each population [28,30,31].

Several studies[32-36] shows that difficulties in the work process of FHSC are related to the need of adequacy to the education background, still theorized and fragmented, of the professionals who are part of the teams. The greatest difficulty is to learn from the collective work in a specific territory, which depends on flexibility and interaction of the professionals involved to create possibilities for collaborative, integrated and intersectoral action to incorporate the participation of users in the expanded conception of health[37].

It is noticed that the FHSC trajectory since its creation until nowadays was based on the expansion of FHS health services. However, the lack of specialized services can lead to a mistaken operation of the FHSC, tending to replace the "missing service" as an attempt to attend the population's demand[37]. A higher FHSC coverage in a certain region does not mean that it is related to a reduction in the ACSC rates, and interventions at this level of care do not always have wide enough scope to deal with inequities of health, as well as in the care of groups exposed to different social strata, vulnerability, which can interfere on these hospitalizations[30-32,37,38].

Considering the health assistance provided by SUS and the perspective about FHSC, changes are necessary in this system, in the management or in the field of health professionals' qualified actions[33]. The investigation on the highlighted issues in our study, such as the performance of professionals and the impact on PC, possible influences on ACSC rates, can contribute to a better service and coverage for the Brazilian population.

CONCLUSION

Between 1998 and 2016, there was an expansion of family health teams all over Brazil: 40,490 of them were established in 5,483 municipalities, covering 64.2% of the population. The number of FHSC in the Northeast and the respective population coverage was higher in relation to other regions. On the other hand, a higher ACSC decrease occurred in the Midwest, which has less FHSC established. The highest FHSC coverage has not resulted in a reduction of ACSC's rates in more vulnerable populations within the context of social determinants.

ACKNOWLEDGEMENTS

We thank Bila Gallo and Olívia Lucena de Medeiros from the Department of Primary Health Care of the

Ministry of Health; Ignez Magalhães and Marcos Franco from the National Council of Municipal Health Secretariats – CONASEMS-DF, Diego Volpato Finato – IBGE-PF-RS and César Damián Moretti for the statistical review.

REFERENCES

1. Brasil. Ministério da Saúde. Política Nacional de Atenção Básica. Brasília, DF: Ministério da Saúde; 2012.
2. Testa M. Atenção Primária (ou primitiva?). In: Testa M, organizador. Pensar em saúde. Porto Alegre: Artes Médicas; 1992.
3. Mello GA, Fontanella BJB, Demazo MMP. Atenção Básica e Atenção Primária à Saúde: origens e diferenças conceituais. 2009. Rev APS [Internet]. 2009 abr./jun. [acesso em 25 out. 2016];12(2):204-13. Disponível em: https://aps.ufjf.emnuvens.com.br/aps/article/view/307/203
4. Brasil. Ministério da Saúde. Portaria GM nº 2.488 de 21 de outubro de 2011. Institui a nova Política Nacional de Atenção Básica. Diário Oficial da União. 21 out 2011.
5. Brasil. Ministério da Saúde. Portaria GM nº 154 de 24 de janeiro de 2008. Cria os Núcleos de Apoio à Saúde da Família – NASF. Diário Oficial da União. 25 jun. 2008; Seção 1.
6. Brasil. Ministério da Saúde. Departamento de Atenção Básica [Internet]. Núcleo de Apoio a Saúde da Família – Perguntas Frequentes. [acesso em 26 jun. 2016]. Disponível em: http://dab.saude.gov.br/portaldab/nasf_perguntas_frequentes.php
7. Moreira PHB, Rodrigues ACF, Pereira CA, Marques FO, Lehner GH, Oliveira TS, et al. A inserção do fisioterapeuta na equipe multiprofissional – Programa Saúde da Família (PSF). [Internet] 2008 [cited 2015 Abr 15]. Disponível em: http://fisionasaude.com.br
8. Alfradique ME, Bonolo PF, Dourado I, Lima-Costa MF, Macinko J, Mendonça CS, et al. Internações por condições sensíveis à atenção primária: a construção da lista brasileira como ferramenta para medir o desempenho do sistema de saúde. Cad Saúde Pública. 2009;25(6):1337-49.
9. Brasil. Ministério da Saúde. Portaria GM nº 221 de 17 de abril de 2008. Publica na forma de anexo a Lista Brasileira de Internações por Condições Sensíveis à Atenção Primária. Diário Oficial da União. 21 set. 2008.
10. Campos AZ, Theme-Filha MM. Internações por condições sensíveis à atenção primária em Campo Grande, Mato Grosso do Sul, Brasil, 2000 a 2009. Cad Saúde Pública. 2012;28(5):845-55.
11. Rehem TCMSB, Ciosak SI, Egry EY. Internações por condições sensíveis à atenção primária no hospital geral de uma microrregião de saúde do município de São Paulo, Brasil. Texto contexto – Enferm. 2012;21(3):535-42.
12. Rehem TCMSB, Egry EY. Internações por condições sensíveis à atenção primária no Estado de São Paulo. Ciênc Saúde Coletiva. 2011;16(12):4755-66.
13. Ferreira JB, Borges MJG, Santos LL, Forster AC. Internações por condições sensíveis à atenção primária à saúde em uma região de saúde paulista, 2008 à 2010. Epidemiol Serv Saúde. 2014;23(1):45-56.
14. Brasil. Ministério da Saúde. Departamento de Atenção Básica. Histórico de Cobertura da Saúde da Família [Internet]. [acesso em 26 jun. 2016]. Disponível em: http://bit.ly/1PH608L
15. Brasil. Ministério da Saúde. Departamento de Atenção Básica. Rede Interagencial de Informações para a Saúde [Internet]. [acesso em 30 set. 2016]. Disponível em: http://tabnet.datasus.gov.br/cgi/deftohtm.exe?idb2012/d29.def
16. Silva ATC, Aguiar ME, Winck K, Rodrigues KGW, Sato ME, Grisi SJFE. Núcleos de Apoio à Saúde da Família: desafios e potencialidades na visão dos profissionais da Atenção Primária do Município de São Paulo, Brasil. Cad Saúde Pública. 2012;28(11):2076-84.
17. Brasil. Ministério da Saúde. Portaria GM nº; 2.203, de 5 de novembro de 1996. Publica a Norma Operacional Básica do Sistema Único de Saúde. Diário Oficial da União. 5 nov. 1996..
18. Brasil. Ministério da Saúde. Projeto de Expansão e Consolidação do Saúde da Família. Brasília, DF: Ministério da Saúde; 2005.
19. Franco TB, Pinto H. Fundações Estatais como dispositivo para a desprivatização do estado Brasileiro [Internet]. [acesso em 27 set. 2014]. Disponível em: http://bit.ly/2eCcsqT
20. Pinto HÁ, Franco TB, Merhy EE. Fundação estatal e o fortalecimento da capacidade de ação do Estado [Internet]. [acesso em 27 set. 2014]. Disponível em: http://bit.ly/2eOzuqp
21. Braga DG. Conflitos, eficiência e democracia na gestão pública. Rio de Janeiro: Fiocruz; 1998.
22. Brasil. Ministério da Saúde. Diretrizes do NASF: Núcleo de Apoio Saúde da Família. Brasília, DF: Ministério da Saúde; 2010.
23. Instituto Brasileiro de Geografia e Estatística (IBGE). Projeção populacional em 2015: Passo Fundo: IBGE; 2016.
24. Brasil. Secretaria de Assistência Social. Departamento de Atenção Básica. Coordenação-Geral de Alimentação e Nutrição [Internet]. [acesso em 27 set. 2014]. Disponível em: http://bolsafamilia.datasus.gov.br/w3c/bfa.asp
25. Brasil. Programa das Nações Unidas para o Desenvolvimento (PNUD). Objetivos de desenvolvimento do milênio: relatório nacional de acompanhamento. Brasília, DF: Ipea; 2014.
26. Barata RB. Desigualdades sociais e saúde. In: Campos, GWS.; Minayo, MCS.; Buss, PM.; Pellegrini Filho A. A saúde e seus determinantes sociais. Physis: Rev Saúde Coletiva. 2007;17(1):77-93.
27. Carvalho AT, Almeida ER, Jaime PC. Condicionalidades em saúde do programa Bolsa Família – Brasil: uma análise a partir de profissionais da saúde. Saúde soc. [Internet]. dez. 2014 [acesso em 28 ago. 2016];23(4):1370-82. Disponível em: http://bit.ly/2eNLsiT
28. Brasil. Ministério do Planejamento, Orçamento e Gestão. Indicadores de desenvolvimento brasileiro 2001-2012. Brasília, DF, 2012.

29. Comissão Nacional sobre Determinantes Sociais da Saúde (CNDSS). As causas sociais das iniquidades em saúde no Brasil. Rio de Janeiro: Fiocruz; 2008.
30. Nascimento DDG, Oliveira CMA. Reflexões sobre as competências profissionais para o processo de trabalho nos Núcleos de Apoio à Saúde da Família. Mundo Saúde. 2010;34(1):92-6.
31. Mângia EF, Lancman S. Núcleos de apoio à saúde da família: integralidade e trabalho em equipe multiprofissional. Rev Ter Ocup. 2008;19(2):i.
32. Barbosa EG, Ferreira DLS, Furbino SAR, Ribeiro EEN. Experiência da fisioterapia no Núcleo de Apoio à Saúde da Família em Governador Valadares. Fisioter Mov. 2010;23:323-30.
33. Nascimento DDG, Oliveira MAC. Reflexões sobre as competências profissionais para o processo de trabalho nos Núcleos de Apoio à Saúde da Família. Mundo Saúde (Impr.). 2010;34:92-6.
34. Anjos KF, Meira SS, Ferraz CEO, Vilela ABA, Boery RNSO, Sena ELS. Perspectivas e desafios do núcleo de apoio à saúde da família quanto às práticas em saúde. Saúde debate [Internet]. dez. 2013 [acesso em 28 ago. 2016];37(99):672-80. Disponível em: http://bit.ly/2fcrAu4.
35. Cunha GT, Campos GWS. Apoio matricial e atenção primária em saúde. Saúde soc. 2011;20(4):961-70.
36. Akerman M, Drumond Júnior M, Carvalho YM. Tratado de saúde coletiva. Rio de Janeiro: Hucitec/Fiocruz; 2006.