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# Prevalence of health promotion programs in primary health care units in Brazil

## Prevalência de programas de promoção da saúde em unidades básicas de saúde no Brasil

### ABSTRACT

**OBJECTIVE:** Assessment of prevalence of health promotion programs in primary health care units within Brazil's health system.

**METHODS:** We conducted a cross-sectional descriptive study based on telephone interviews with managers of primary care units. Of a total 42,486 primary health care units listed in the Brazilian Unified Health System directory, 1,600 were randomly selected. Care units from all five Brazilian macroregions were selected proportionally to the number of units in each region. We examined whether any of the following five different types of health promotion programs was available: physical activity; smoking cessation; cessation of alcohol and illicit drug use; healthy eating; and healthy environment. Information was collected on the kinds of activities offered and the status of implementation of the Family Health Strategy at the units.

**RESULTS:** Most units (62.0%) reported having in place three health promotion programs or more and only 3.0% reported having none. Healthy environment (77.0%) and healthy eating (72.0%) programs were the most widely available; smoking and alcohol use cessation were reported in 54.0% and 42.0% of the units. Physical activity programs were offered in less than 40.0% of the units and their availability varied greatly nationwide, from 51.0% in the Southeast to as low as 21.0% in the North. The Family Health Strategy was implemented in most units (61.0%); however, they did not offer more health promotion programs than others did.

**CONCLUSIONS:** Our study showed that most primary care units have in place health promotion programs. Public policies are needed to strengthen primary care services and improve training of health providers to meet the goals of the agenda for health promotion in Brazil.

**DESCRIPTORS:** Health Programs and Plans. Health Centers. Health Promotion. Primary Health Care. Health Surveys.

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## RESUMO

**OBJETIVO:** Estimar a prevalência de programas de promoção da saúde nas unidades básicas de saúde no Brasil.

**MÉTODOS:** Estudo transversal descritivo realizado por meio de entrevistas telefônicas com coordenadores de unidades básicas de saúde. Do total de 42.486 unidades básicas de saúde cadastradas pelo Ministério da Saúde, 1.600 foram aleatoriamente selecionadas. As unidades foram amostradas nas cinco regiões do País de acordo com a proporção de unidades em cada região. Foi analisada a presença ou não de cinco programas de promoção da saúde: promoção de atividade física, cessação de tabagismo, cessação de uso de álcool e drogas ilícitas, alimentação saudável e ambiente saudável. Foram coletados dados sobre o tipo de ações desenvolvidas nos programas e a presença ou não da Estratégia de Saúde da Família na unidade.

**RESULTADOS:** A maioria das unidades básicas de saúde (62,0%) referiu ter pelo menos três programas de promoção da saúde e apenas 3,0% não tinha nenhum. A promoção do ambiente saudável e da alimentação saudável foram os programas mais prevalentes (77,0% e 72,0%, respectivamente), enquanto o controle do tabaco e do álcool foram referidos em 54,0% e 42,0% das unidades de saúde, respectivamente. A promoção de atividade física foi referida em menos de 40,0% das unidades e teve grande variação regional, com prevalência de 51,0% nas unidades do Sudeste e apenas 21,0% nas do Norte. A maioria das unidades de saúde (61,0%) oferecia Estratégia de Saúde da Família, porém não foi verificada maior prevalência de programas de promoção da saúde nessas unidades em relação às outras.

**CONCLUSÕES:** Este estudo mostrou que programas de promoção da saúde estão presentes na maioria das unidades básicas de saúde. Políticas públicas devem fortalecer a infraestrutura das unidades básicas de saúde e melhorar a capacitação dos trabalhadores de saúde para executar adequadamente a agenda de promoção de saúde do governo brasileiro.

**DESCRITORES:** Planos e Programas de Saúde. Centros de Saúde. Promoção da Saúde. Atenção Primária à Saúde. Inquéritos Epidemiológicos.

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## INTRODUCTION

In the light of population aging and the consequent growing burden of non-communicable chronic diseases (NCDs), health promotion is a key public health strategy for tackling the NCD epidemic worldwide.<sup>a</sup> Epidemiological data have shown that, in 2008 in Brazil, a third of the general population (almost 60 million people) reported at least one NCD.<sup>b</sup>

With the implementation of the universal health care model in Brazil – the Unified Health System (SUS) –,

the Family Health Strategy (FHS) has been established as a crucial entry point to care for users into the health system. In this model, FHS teams work in specific geographic areas and are responsible for implementing actions for health promotion, disease prevention, treatment of common health conditions and rehabilitation.<sup>14</sup> Currently, most primary health care units (PHCUs) (over 70.0%) have FHS teams providing care to around 60.0% of the Brazilian population.<sup>c</sup>

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<sup>a</sup> World Health Organization. Ageing and Health Programme Division of Health Promotion, Education and Communication. The Hildelberg guidelines for promoting physical activity among older persons: guidelines series for healthy ageing – 1. Heidelberg, Germany; 1996 [cited 2013 Dec 6]. Available from: [www.who.org](http://www.who.org)

<sup>b</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Análise de Situação de Saúde. Saúde Brasil 2008: 20 anos de Sistema Único de Saúde (SUS) no Brasil. Brasília (DF); 2009. (Série G Estatística e Informação em Saúde).

<sup>c</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Análise de Situação de Saúde. Plano de ações estratégicas para o enfrentamento das doenças crônicas não transmissíveis (DCNT) no Brasil 2011-2022. Brasília (DF); 2011. Available from: [www.saude.gov.br/bvs](http://www.saude.gov.br/bvs)

Health promotion actions have been implemented in primary care in Brazil for less than a decade. The National Health Promotion Policy was introduced in 2006 and its main goals are to promote quality of life and reduce vulnerabilities and risk factors relating to known health determinants. This policy set several high priority actions including promoting healthy eating, physical activity, and tobacco and alcohol cessation, preventing violence, and promoting a sustainable environment.<sup>4</sup>

Since 2006, the regular Telephone-based Surveillance of Risk and Protective Factors for Chronic Diseases Survey (VIGITEL) has provided vital epidemiological information on main NCD risk factors in the Brazilian population nationwide. Given the high prevalence of physical inactivity reported in VIGITEL surveys, actions for promoting physical activity has become a priority in Brazil for the Ministry of Health.<sup>15</sup>

A systematic review of physical activity interventions in Brazil has shown novel interventions that need assessment of their effectiveness.<sup>8,9</sup> A study conducted in the city of Recife, Northeastern Brazil, evaluated the program City Gyms (*Academias da Cidade*<sup>e</sup>) that offered free open spaces for outdoor physical activity, with infrastructure and guidance of trained staff. This study was part of an international collaborative research project between Brazil and the United States – the Guide for Useful Interventions for Physical Activity in Brazil and Latin America (GUIA project).<sup>19,f</sup> It showed that City Gyms are an effective approach for promoting physical activity at the population level.<sup>18,21</sup> The program was then expanded statewide in Pernambuco, Northeastern Brazil, and further assessed.<sup>8</sup> Pooled results from these assessments supported the decision-making of the Ministry of Health to implement the nation's health promotion policy, Health Academies (*Academias da Saúde*<sup>b</sup>) spaces at the primary health care network, with infrastructure, equipment, and staff to encourage and guide people to engage in physical activities.<sup>15</sup>

Although considered a priority, health promotion programs are not yet available in all health care units. Several studies have assessed the effectiveness of health

promotion actions in different settings,<sup>1</sup> but little is known about how prevalent these programs are among PHCUs within the SUS.

This study aimed to analyze the prevalence of health promotion programs in PHCUs in Brazil.

## METHODS

We conducted a cross-sectional study based on telephone interviews with managers of a randomly selected sample of PHCUs nationwide as part of the GUIA Project.<sup>19</sup> The detailed methods have been published elsewhere.<sup>3</sup> In brief, of a total of 42,486 PHCUs listed in the SUS directory, 1,600 were randomly selected to participate in the study. This sampling approach allowed to covering all five Brazilian macroregions and selecting PHCUs proportionally to the number of units in each region. Managers of the selected PHCUs were eligible and invited to participate. Trained interviewers conducted phone interviews that lasted on average 40 minutes. The survey was carried out between January and June 2011.

We estimated the sample size assuming that each type of health promotion program would be available in 50.0% of the PHCUs, with a 95% confidence interval and 4 percent points of confidence limit. Thus, it would be necessary a sample of 592 PHCUs. The sample was increased by 10.0% to cover possible losses and refusals, totaling 642 PHCUs. Given the study's multi-purpose characteristic, we sampled 1,600 units so that we could analyze information collected from medical doctors, nurses and health workers from each PHCU.

We examined whether any of the following five different types of health promotion program was available in the PHCU: promotion of physical activity; smoking cessation; alcohol and illicit drug use cessation; healthy eating; and healthy environment. For each program, information was collected on the kind of activities offered. Data were analyzed using SPSS version 13.1, frequencies of health promotion programs were described by category of care unit and macroregion. PHCUs were categorized as follows based on the status of implementation of FHS: FHS only; traditional care strategy with no FHS (TRAD); and mixed

<sup>d</sup> Ministério da Saúde. Secretaria de Vigilância em Saúde. Secretaria de Atenção à Saúde. Política Nacional de Promoção da Saúde. Brasília (DF): 2010. (Série Pactos pela Saúde 2006; 7).

<sup>e</sup> The Government of Pernambuco in Brazil, have sponsored open spaces in the city of Recife, equipped for physical activity and with a professional available in the beginning and at the end of the day, free of charge for those attending. It became known as the city gyms: Prefeitura da Cidade de Recife. Academia da cidade. Recife (PE); 2008 [cited 2013 Dec 1]. Available from: <http://www2.recife.pe.gov.br/projetos-e-aco-es/projetos/academia-da-cidade/>

<sup>f</sup> Project GUIA was a joint venture of American and Brazilian universities, sponsored by the CDC in Atlanta, that conducted several studies in Brazil concerning the promotion of physical activity, which led to the present study: a complete view of the project and its results. Washington (DC); 2005 [cited 2013 Dec 1]. Available from: <http://www.projectguia.org/>

<sup>8</sup> Ministério da Saúde. Atividade física no Brasil: uma revisão de evidências em experiências selecionadas. In: Saúde Brasil 2010: uma análise da situação de saúde e de evidências selecionadas de impacto de ações de vigilância em saúde. Brasília (DF); 2011.

<sup>b</sup> Ministério da Saúde. The national policy transformed the city gyms in health promotion spaces – health academies – with a wider range of activities. Brasília (DF); 2002. Available from: [http://portal.saude.gov.br/portal/saude/profissional/visualizar\\_texto.cfm?idtxt=37245&janela=1](http://portal.saude.gov.br/portal/saude/profissional/visualizar_texto.cfm?idtxt=37245&janela=1)

<sup>1</sup> Health Canada. Health Promotion Effectiveness. Health Promotion - Does it work? *Health Policy Res Bull.* 2002 [cited 2013 Dec 1];1(3):3-30. Available from: [http://www.hc-sc.gc.ca/sr-sr/alt\\_formats/hpb-dgpps/pdf/pubs/hpr-rps/bull/2002-3-promotion/2002-3-promotion-eng.pdf](http://www.hc-sc.gc.ca/sr-sr/alt_formats/hpb-dgpps/pdf/pubs/hpr-rps/bull/2002-3-promotion/2002-3-promotion-eng.pdf)

implementation of both care strategies (MIX). The 27 Brazilian states are divided into five macroregions; North; Northeast; South; Southeast; and Midwest.

The study was approved by the national ethics research committee (*Conselho Nacional de Ética em Pesquisa* – Protocol 16154, 2010).

## RESULTS

Our sample comprised 1,600 PHCU from all five macroregions, selected roughly proportionally to the population in each macroregion in relation to the total population of Brazil. For instance, 39.0% of the PHCUs selected were in the Northeast though this macroregion accounts for 28.0% of the total population. On the other hand, 30.0% of the PHCUs selected were from the Southeast though it accounts for 42.0% of the total population. We interviewed 1,251 PHCU's managers, and the overall response rate was 78.0% ranging from 90.0% in the South to 58.0% in the North (Table 1). We have no information on the category of PHCU and background of the manager for cases with missing data.

Most managers (76.9%) had a nursing background and only 1.9% were medical doctors. Most PHCUs were categorized as FHS only (60.8%), whereas 23.6% were TRAD, and 15.6% MIX.

Table 2 shows the prevalence of each type of health promotion program in the primary health care system, by category of PHCU. Physical activity promotion was reported in 39.8% of PHCU, with no significant differences between the three categories of PHCUs: 39.8% in FHS only, 37.4% in TRAD, and 43.3% in MIX. The most frequently reported activities were supervised walking groups (81.1%), stretching and relaxation (77.3%), and fitness evaluation (67.1%).<sup>4</sup>

Promotion of tobacco cessation was reported in 54.4% of PHCUs, but it was significantly more prevalent in TRAD (60.1%) when compared to FHS (51.9%) and MIX (55.7%). Smoking cessation campaigns were reported in 66.2% of PHCUs, followed by group counselling (51.6%), and use of medication for smoking cessation that was reported in only 32.8% of PHCUs.

Alcohol and illicit drug use prevention was reported in 41.6% of PHCUs, with no differences between the three categories of PHCUs. Of those PHCUs having an alcohol cessation program, only 43.3% referred users to specialized care, and more than half (51.8%) had support groups.

Healthy eating promotion was reported in most PHCUs (72.0%), but this program was significantly less available in MIX PHCUs (64.4%). The activities reported included training of health professionals (29.4%); classes on food nutritional values and food processing (18.7%); vegetable gardening classes (8.2%); and experimental kitchens (7.5%).

Healthy environment promotion was also reported in most PHCUs (77.7%) regardless of their category and they included guidance for creating healthier environments (80.6%), followed by interventions at local schools (49.5%) and community centers (23.3%).

Only 3.2% of PHCUs did not have any health promotion activity. Most PHCUs (62.3%) reported having at least three programs in place and 8.4% offered all activities listed in our questionnaire.

Regarding regional differences, Table 3 shows the prevalence of health promotion programs by macroregion. Promotion of physical activity programs significantly varied amongst regions, being offered by an average of 39.8% of PHCUs, ranging from 50.9% in the Southeast to 21.3% in the North. Promotion of healthy eating programs also showed significant regional variation, being reported in only 61.7% of PHCUs in the North and almost 80.0% in the Midwest. All other health promotion activities (tobacco and alcohol/drug cessation and healthy environment) were similarly prevalent in PHCUs of all regions.

## DISCUSSION

Our study showed that health promotion programs are present in most PHCUs in Brazil. Almost all PHCUs 97.0% had at least one type of health promotion program in place and 60.0% offered three programs or

**Table 1.** Number of primary health care units selected, non-response and response rates by macroregion. Brazil, 2009.

Macroregion	Number of PHCUs selected	%	Non-response	%	Response rate (%)
Midwest	110	6.9	13	3.7	88.2
Northeast	629	39.3	174	49.9	72.3
North	138	8.6	58	16.6	58.0
Southeast	473	29.6	79	22.6	83.3
South	250	15.6	25	7.2	90.0
Total	1,600	100.0	349	100.0	78.2

PHCU: Primary health care unit

**Table 2.** Prevalence of health promotion programs by category of primary health care unit in the Unified Health System. Brazil, 2009.

Health promotion program	Category of primary health care unit				Total (N = 1,251)	
	FHS (n = 761)	TRAD (n = 295)	MIX (n = 195)			
Physical activity	39.8	37.4	43.3	39.8		NS
Tobacco cessation	51.9	60.1	55.7	54.4		p < 0.05
Healthy eating	74.0	72.0	64.4	72.0		p < 0.03
Alcohol use cessation	40.8	43.3	41.8	41.6		NS
Healthy environment	79.4	74.4	75.8	77.7		NS

FHS: Family Health Strategy only; TRAD: traditional care strategy; MIX: mixed combination of care strategies; NS: Non-significant

more. Considering that the national health promotion policy was adopted less than a decade ago, one can say these are encouraging results.

According to the World Health Organization (WHO), health promotion is a process of enabling people to increase control over health determinants and to improve their quality of life. In Brazil, this concept has been newly defined as “new health promotion”, based on the idea that health promotion should aim to reduce health inequalities by ensuring opportunities to all people to have a leading role in the process of being healthy and improving their quality of life.<sup>13,14</sup>

The most prevalent health promotion programs in PHCUs in Brazil are promotion of healthy eating, healthy environment, and tobacco cessation. Smoking has a long history of prevention in Brazil given the widespread recognition of the harmful effects of tobacco use.<sup>15,16</sup> Tobacco use prevention activities including visual campaigns, counseling and support groups are offered in more than half of the PHCU, but they are significantly more prevalent among the traditional PHCUs.

On the other hand, promotion of physical activity has a more recent history in Brazil. There are also a wider range of activities for promoting physical activity, and they require greater investments in skilled human resources, adequate spaces, referrals and appropriate equipment.<sup>4</sup> Hence, we found in our study a relatively low prevalence of physical activity promotion programs (less than 40.0%) in PHCUs. Nonetheless, many activities have been recently introduced in Brazil including the implementation and evaluation of programs like City Gyms and the nationwide program Health Academies. These types of programs provide fitness training classes in community settings and have shown great potential for increasing physical activity levels at the population level.<sup>9,18,21</sup> It is encouraging that Brazil has the infrastructure in place to link up health care and community services to promote physical activity within its health system. These types of programs, also known as “exercise referral programs”, have shown to

be effective, at least in the short-term, and have helped adults in Europe, Australia, New Zealand and the United States lead a more physically active life.<sup>7</sup> However, to our knowledge, Brazil is the only Latin American country that has developed a large-scale approach and implemented a national policy for promoting of physical activity within its health system.

Given the rapid aging process of the Brazilian population since the 1980's<sup>1,20</sup> and an age-related risk of increasing physical inactivity,<sup>2,6</sup> the prevalence of physical inactivity among adults is likely to increase. There is accumulating evidence linking healthy aging with active lifestyles,<sup>5,a,j</sup> which should increase the demand for opportunities to participate in physical activities, especially within the health system.

Regional comparisons confirmed patterns of socioeconomic inequalities between the North/Northeast and South/Southeast as reflected in health indicators. For instance, in 2010 in Brazil, infant mortality rate was 15.3 per 1,000 live births nationwide while it was as high as 20.9 per 1,000 in the North and as low as 10.9 per 1,000 in the South.<sup>22</sup> Health promotion programs tend to be more prevalent in the affluent South compared to more deprived regions such as the North. Physical activity promotion was the program that showed the greatest variation in prevalence, from 21.0% in the North to 51.0% in the Southeast. Special attention should be given to regional inequalities in access to health care, especially in the North and Northeast. Although designed to foster health promotion at the primary care level, the FHS did not seem to have significantly improved the availability of physical activity promotion in PHCUs. Nevertheless, our data did not allow to assessing the quality and effectiveness of these programs. Some studies have reported an impact of FHS in reducing hospital admission rates for ambulatory sensitive primary care conditions that are most related to chronic diseases.<sup>12</sup> Further studies are needed to investigate whether the quality of health promotion programs is different by category of PHCU.

<sup>1</sup> Pan American Health Organization. Physical activity for active aging. Geneva; 2002. Available from: <http://bvse.bvsalud.org/dol/docsonline/9/2/029-PAHO-ActAge-eng-all.pdf>

**Table 3.** Prevalence of the health promotion programs by macroregion of primary health care units in the Unified Health System. Brazil, 2009.

Health promotion program	Macroregion						
	Southeast (n = 394)	Northeast (n = 455)	North (n = 80)	South (n = 225)	Midwest (n = 97)	Total (N = 1,251)	
Physical activity	50.9	34.7	21.3	34.7	45.9	39.8	p < 0.000
Tobacco cessation	49.5	57.0	59.3	58.0	49.5	54.4	NS
Healthy eating	72.0	76.6	61.7	63.4	79.6	72.0	p < 0.001
Alcohol use cessation	36.9	45.0	37.0	42.9	45.4	41.6	NS
Healthy environment	74.8	80.2	68.8	80.3	78.6	77.7	NS

NS: Non-significant

Even though promotion of healthy diets was the most prevalent program in PHCUs, the 1999 National Nutrition Policy has not been fully implemented yet.<sup>10</sup> This is a matter of concern due to growing obesity rates in Brazil. Although there are several guidelines to implement nutrition actions at the primary care level, our findings stress the importance of improving nutrition actions at PHCUs.

Less than half of PHCUs reported alcohol and illicit drug use prevention actions, and users were not usually referred to specialized care at a referral center. Primary care could effectively manage prevention and treatment actions including screening, brief interventions, and monitoring in individuals or populations at risk.<sup>23</sup> Our data suggest that these approaches have to be urgently and rapidly disseminated among primary care providers.

As for healthy environment promotion at PHCUs, our data showed that it is very sensitive to intersectoral actions, which may be effective strategies to mitigate environmental hazards. For instance, a negative

association between overweight prevalence and density of parks and public sport facilities has been reported in the city of Sao Paulo, Southeastern Brazil.<sup>11</sup>

The national health promotion policy has become a priority in the public health agenda in Brazil. Some health promotion programs like tobacco cessation are widely disseminated and have already reduced smoking prevalence among adults.<sup>16,17</sup> Others like physical activity promotion are not yet available in most PHCUs but they are rapidly increasing across the country. Investments in infrastructure and staff training are vital for successful programs and our data show there is still a large gap within the public health system.

The study results provide valuable baseline input to assess future public health and health promotion actions as part of the national plan to control the rise of NCDs by 2022. One of the plan's goals is to disseminate, implement and support programs like health academies, and other health promotion activities at the national level, embedded within Brazil's health care system.

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## HIGHLIGHTS

The study investigated the presence or absence of five health promotion programs proposed by the National Health Promotion Policy in the primary care units of the Unified Health System (SUS) all over Brazil.

The absolute majority (97.0%) of the units has one of these programs in operation and more than 60.0% have at least three programs. The prevalence of some programs differed significantly according to the region of Brazil, mainly to the detriment of the North region. The physical activity promotion program showed the lowest prevalence. It is the most recent program and it has received large investments from the Ministry of Health.

The results will help the Ministry of Health to assess the evolution of the National Health Promotion Policy and to identify regional deficiencies in the implementation of some programs.

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