






First choice for use of health services by the adult population of the Federal District, Brazil, 2015: a cross-sectional study*

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Abstract

Objective: to describe the first choice for use of health services and to analyze sociodemographic factors associated with seeking Primary Health Care (PHC) by the adult population of Brazil's Federal District in 2015. **Methods:** this was a population-based study, with 2,007 individuals, using a sample from the 2015 VIGITEL survey conducted by landline telephone, including questions on use of health services; we used logistic regression to identify factors associated with seeking PHC services. **Results:** participants' first choice was predominantly for private health services (57.6%), respondents reported seeking public health services less (39.5%), particularly PHC services (primary health centers: 24.6%); multivariate analysis showed that educational level (postgraduate [OR=0.15 – 95% CI 0.04;0.59] and high school [OR=0.37 – 95%CI 0.18;0.75]), and not having private health insurance (OR=27.77 – 95%CI 10.61;72.70) were variables associated with seeking PHC services. **Conclusion:** individuals with low educational level and without private health insurance are those who mostly seek PHC services as their first choice in Brazil's Federal District.

Keywords: Primary Health Care; Health Services; Epidemiology, Descriptive; Health Evaluation; Cross-Sectional Studies.

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Introduction

In the Brazilian National Health System (SUS), Primary Health Care (PHC) is the level of care at which universal and equal access to health actions and services is organized. PHC is considered to be the service user's entry point to SUS and has the role of greeting and assisting service users and promoting linkage to services and co-responsibility for care for their health needs.¹

Use of health services encompasses all direct contact with doctors and with other professionals involved in health care procedures, right from disease prevention through to rehabilitation.² The determinant factors of access and use of these services are multiple and include characteristics of service delivery, the profile of each health need and service users' preferences and choices.² Authors have described the persistence of inequities in use, coverage and access to health services.²⁻¹⁰

Primary Health Care is considered to be the service user's entry point to SUS and has the role of greeting and assisting service users and promoting linkage to services and co-responsibility for care for their health needs.

This study aimed to describe the first choice for use of health services and to analyze sociodemographic factors associated with adults seeking Primary Health Care (PHC) in Brazil's Federal District in 2015.

Methods

This was a population-based study conducted in Brazil's Federal District and based on a sample from the VIGITEL System (Telephone Surveillance of Non-communicable diseases and Protective Factors) survey. The VIGITEL survey comprises the adult population (≥ 18 years old) of the capital cities of the 26 Brazilian states and its Federal District, living in households with, at least, one landline telephone number. The details of the methodology, adopted for all Brazil, have already been published.¹¹

The 2015 edition of the VIGITEL survey included specific questions on the use of referral health care services in Belo Horizonte, capital of the Brazilian state of Minas Gerais, and in Brazil's Federal District. Our study used VIGITEL data for the Federal District.

The administrative organization of Brazil's Federal District is peculiar to it. It has characteristics of both capital-municipality and also characteristics of a state. It has a high municipal Human Development Index (HDI), along with one of the highest Gini index scores in Brazil.¹² The health model in the Federal District is predominantly that of hospital care,¹³ while the Family Health Strategy – FHS has extremely low population coverage (20.1% in 2013).¹⁰

The population analyzed in this study was 18 years old or more, lived in the Federal District and had a landline telephone number.

As well as answering the VIGITEL national questionnaire, VIGITEL participants in the Federal District also answered questions on the use of health services as part of a pilot study, developed alongside the VIGITEL instrument and intended for evaluation of health services use, namely the VIGITEL-evaluation instrument. The interviews were based on a structured questionnaire comprised of steps of questions.

The first step was contained in the VIGITEL instrument¹¹ and included sociodemographic questions and questions related to the health situation, whereby we analyzed the “sex”, “age group”, “education level” and “health insurance coverage” variables.

The second step was contained in the VIGITEL-evaluation instrument and was related to the use of health services. These questions were developed and pre-tested in this study, and the variables created were based on the answers obtained, as follows.

Question 1

“When you are sick or need support to take care of your own health, which health service do you usually go to?” (Retrieved from the 2013 National Health Survey – NHS14)

Variables: type of service provider (private; public; other); and level of care (Primary Care, Secondary Care, Tertiary Care; other).

Question 2

“In the last 12 months, have you sought care at a Primary Health Care Unit (PHU) (in ordinary health care units or Family Health units) to take care of your own health? If yes, how many times?”

Variable: Use of Primary Health Care service (none; once or twice; 3 or more times; can't remember).

Question 3

“The last time you went to a health care center, did you receive care?”

Variable: PHC care service (yes; no; can't remember; doesn't know).

In addition to interviewer training, pre-testing and standardization of the instrument and data collection, we also incorporated post-stratification weighting in all the analysis statistical with the aim of minimizing possible biases arising from low landline telephone coverage. This measure takes into account the unequal probability of individuals living in households with more landline telephones or lower number of residents participating in the sample, besides correcting overestimation or underestimation of the VIGITEL sample resulting from unequal landline telephone coverage in Brazil.

The sample procedures adopted by VIGITEL aim to obtain probabilistic samples of the study population – minimum sample size of 2,000 individuals – for each one of the 26 Brazilian state capitals and the Federal District.

Prevalence estimates were presented in proportions (%), with their respective 95% confidence intervals (95%CI). The results were calculated by sex (male; female), age group (in years: 18-29; 30-39; 40-59; 60 or more), education level (no formal education; elementary school; high school; higher education; post-graduation) and health insurance coverage (yes; no). These variables were considered to be independent variables in the logistic regression statistical modeling. The *odds ratios* (OR) and corresponding 95%CI were estimated by crude and adjusted logistic regression models, which had as their dependent variable the habit of seeking care at PHC services (yes versus no).

This analysis assumes that a person's sociodemographic profile affects their pattern of seeking health services and is permeated by multiple determinants not analyzed in this study. All the independent variables were included in the regression model simultaneously, and then removed one by one according to their statistical significance level guided by the limit of $p < 0.05$ (backward stepwise selection). The "age" variable was kept in the final adjusted model, regardless of its statistical significance, given the interest in its adjustment and comparison with other studies that use this variable in their analyses. Data analysis was performed using Stata version 11.0 software.

The study project was approved by the University of Brasília Faculty of Medicine Research Ethics Committee: Report No. 089/12 CEP/FM/UnB, dated 5 May 2013. The VIGITEL survey was approved by the Ministry of Health's National Research Ethics

Committee (CONEP): Report No. 355.590, dated 26 June 2013. Verbal consent of the interviewees was recorded on a Free and Informed Consent form during the telephone call.

Results

We interviewed 2,007 individuals. Refusals to participate accounted for 4.0% of the qualifying fixed lines.

Predominance was found in relation to females (53.3% – 95%CI 49.1;57.6), people in the 40-50 years age group (33.2% – 95%CI 29.4; 37.0) and those who had private health insurance (60.0% – 95%CI 55.6;64.3). The study population had a high education level: 34.6% (95%CI 30.8;38.5) had completed high school and 26.8% (95%CI 23.7;29.8) had higher education qualifications (Table 1).

Most of the population analyzed said that their first choice of health services would be private clinics (37.8% – 95%CI 34.1;41.6), followed by PHU (24.6% – 95%CI 20.3;28.8). It is important to emphasize that home care with an FHS professional was not reported by the population consulted (0.0% – 95%CI 0.0;0.1) ((Table 1).

With regard to the service provider type, most of the study population said that private health services were their first choice (57.6% – 95%CI 53.2;62.0), as opposed to public services (39.5% – 95%CI 35.1;44.0) (Table 2).

Males and females had similar distribution in relation to their first choice of health services with regard to service provider type (Table 2). We found that the proportion of people seeking private health care services rather than public services increased according to age and schooling: for most people aged 60 or older private health services were their first choice (73.1% – 95%CI 67.0;79.3). This was also the case of most people with post-graduate qualifications (92.7% – 95%CI 89.0;96.4).

We found high percentages of people seeking public health services as their first choice when they did not have private health insurance (85.8% – 95%CI 82.0;89.7), had only elementary school education (8.1% – 95%CI 58.4;77.7) or had no formal education (76.3% – 95%CI 33.8;100.0).

Regarding the distribution of these services according to health service level, the majority (41.5% – 95%CI 37.5;45.4) said that they sought secondary

Table 1 – Sociodemographic characteristics and first choice health service use, Federal District, 2015^a

Characteristics (n=2,007)	%	95%CI ^b	
Sex			
Female	53.3	49.1	57.6
Male	46.7	42.4	50.9
Age group (in years)			
18-29	27.7	23.7	31.6
30-39	25.5	21.4	29.7
40-59	33.2	29.4	37.0
≥60	13.6	11.8	15.3
Education level			
No formal education	1.9	1.3	2.5
Elementary school	28.3	23.7	33.0
High school	34.6	30.8	38.5
Higher education	26.8	23.7	29.8
Post-graduation	7.0	5.8	8.1
Not known/not informed	1.4	0.6	2.2
Health Insurance			
Yes	60.0	55.6	64.3
No	40.0	35.7	44.4
Most used health service (n=2,003)^c			
Public			
PHU ^d	24.6	20.3	28.8
Specialty, polyclinic or EC ^e	0.7	0.1	1.3
Emergency Care Center	2.3	0.5	4.1
Other type of 24 hours emergency care	0.1	–	0.2
Hospital emergency care unit	2.5	1.3	3.8
Hospital	9.2	6.4	11.9
Home visit by an FHS ^f professional	–	–	–
Private			
Consulting room or clinic	37.8	34.1	41.6
Outpatient clinic or consulting room company/trade union	0.7	0.2	1.1
Hospital emergency care unit	14.7	12.1	17.6
Home visits by a doctor	0.3	0.1	0.6
Pharmacy	1.5	0.3	2.7
Other service	5.5	3.7	7.2

a) Percentage weighted to adjust the sociodemographic distribution of the VIGITEL sample to the distribution of Federal District's adult population.

b) 95%CI: 95% confidence interval.

c) Answer to the question: "When you are sick or need support to take care of your own health, which health service do you usually go to?" (Only the first service mentioned was recorded).

d) PHU: Primary Health Unit.

e) EC: emergency care.

f) FHS: Family Health Strategy.

Table 2 – Distribution of first choice health service use per type of health service provider, Federal District, 2015^a

Variables	Nature of first choice health service								
	Private			Public			Other ^b		
	Proportion (%)	95% CI ^c		Proportion (%)	95% CI ^c		Proportion (%)	95% CI ^c	
Sex									
Male	57.1	49.8	64.4	39.9	32.4	47.3	3.0	1.2	4.9
Female	58.1	52.9	63.2	39.2	34.1	44.4	2.7	1.4	4.0
Age group (in years)									
18-29	63.6	54.3	72.9	33.2	23.8	42.6	3.2	0.4	6.1
30-39	47.6	37.8	57.4	49.8	39.9	59.8	2.6	0.5	4.7
40-59	54.0	47.2	60.8	43.4	36.5	50.2	2.6	2.0	4.2
≥60	73.1	67.0	79.3	23.7	17.5	30.0	3.1	1.7	4.6
Education level									
No formal education	22.1	–	64.2	76.3	33.8	100.0	1.6	–	5.8
Elementary school	31.4	21.2	41.1	68.1	58.4	77.7	0.5	–	1.1
High school	53.3	46.7	59.9	41.5	34.8	48.1	5.2	2.5	8.0
Higher education	83.1	78.6	87.6	14.2	10.0	18.5	2.7	0.9	4.5
Post-graduation	92.7	89.0	96.4	5.4	2.3	8.5	1.9	–	4.1
Not known/not informed	80.1	55.8	100.0	18.6	–	42.9	1.3	–	4.1
Private Health Insurance									
Yes	88.1	84.3	92.0	8.7	5.1	12.3	3.2	1.6	4.8
No	11.9	8.3	15.4	85.8	82.0	89.7	2.3	0.9	3.8
Total	57.6	53.2	62.0	39.5	35.1	44.0	2.9	1.7	4.0

a) Categorization of the answer to the question: "When you are sick or need support to take care of your own health, which health service do you usually go to?" (Only the first service mentioned was recorded). All values that exceeded 100 were adjusted to the maximum limit of 100.0; and all negative values were adjusted to –.

b) Percentage weighted to adjust the sociodemographic distribution of the VIGITEL sample to the distribution of Federal District's adult population.

c) Other services, not classified.

d) 95%CI: 95% confidence interval.

level services, i.e. emergency care and medical specialties. A smaller percentage reported preferring PHC services (24.8% – 95%CI 20.5;29.0) as their first choice (Table 3). First choice of type of service provider regarding care service level was equally distributed between males and females. There was a slight increase in the use of Secondary Care as first choice as age increased. In the case of those aged 60 or more (55.8% – 95%CI 49.9;61.7) and those with higher education levels (postgraduate: 65.4% – 95%CI 58.6;72.1), we found that a high proportion (16.7% – 95%CI 10.6;22.9) opted for Secondary Care services; while a low proportion chose PHC services (2.2% – 95%CI 0.0;4.5).

In relation to education level, high proportions of those with high school education (41.9% – 95%CI 35.5;48.3) and higher education (58.7% – 95%CI

53.1;64.3) reported seeking Secondary Care services as their first choice. On the other hand, high proportions of the those who only had elementary education (45.7% – 95%CI 34.9;56.5) or who had no formal education (73.5% – 95%CI 30.2;100.0) reported that they usually sought PHC services (Table 3).

The majority of the population studied (58.8% – 95%CI 54.5;63.0), particularly those who had private health insurance (70.9% – 95%CI 66.5;75.4), said they had not used an ordinary public health care unit or a public Family Health unit to take care of their own health in the last 12 months (Table 4). We found that distribution regarding the frequency of PHU use in the last 12 months did not differ according to sex, age or education level.

The majority of the population studied who stated having used a PHU once or twice in the last 12 months, said that they received care the last time they sought

Table 3 – Distribution of first choice health service use, according to respondent characteristics and health care level, Federal District, 2015^a

Variables	First choice health care level ^b											
	Primary care			Secondary care			Tertiary care			Other ^c		
	Proportion (%)	95%CI ^d		Proportion (%)	95%CI ^d		Proportion (%)	95%CI ^d		Proportion (%)	95%CI ^d	
Sex												
Male	25.6	18.2	32.8	41.3	34.7	47.9	25.3	19.5	31.7	7.6	4.0	11.3
Female	24.1	19.4	28.9	41.6	37.0	46.3	27.2	22.7	31.8	7.0	4.7	9.4
Age group (in years)												
18-29	18.2	10.1	26.2	49.6	40.8	58.4	26.6	19.2	34.0	5.6	2.1	9.1
30-39	35.5	25.0	46.0	29.4	22.2	36.6	28.1	19.0	37.1	7.0	2.2	11.9
40-59	25.3	19.0	31.5	38.1	32.0	44.2	27.7	21.7	33.8	8.9	4.7	13.2
≥60	16.7	10.6	22.9	55.8	49.9	61.7	20.0	15.7	24.3	7.5	5.2	9.8
Education level												
No formal education	73.5	30.2	100.0	22.1	–	64.2	2.8	–	9.8	1.6	–	5.8
Elementary school	45.7	34.9	56.5	21.0	13.2	28.8	24.8	15.2	34.4	8.5	2.7	14.3
High school	21.4	15.8	27.1	41.9	35.5	48.3	29.4	23.4	35.4	7.3	4.1	10.5
Higher education	10.2	6.2	14.3	58.7	53.1	64.3	24.8	20.0	29.5	6.3	3.8	8.9
Post-graduation	2.2	–	4.5	65.4	58.6	72.1	28.6	22.3	34.9	3.8	1.2	6.4
Not known/not informed	7.6	–	22.3	22.4	5.8	38.9	40.9	9.8	72.0	29.1	3.6	54.6
Health Insurance												
Yes	3.4	0.8	6.1	59.6	54.7	64.5	27.2	22.7	31.6	9.8	6.5	13.0
No	56.7	49.2	64.2	14.2	9.3	19.1	25.4	18.9	31.9	3.7	1.8	5.5
Total	24.8	20.5	29.0	41.5	37.5	45.4	26.5	22.7	30.2	7.3	5.2	9.5

a) Percentage weighted to adjust the sociodemographic distribution of the VIGITEL sample to the distribution of Federal District's adult population.

c) Answer to the question: "When you are sick or need support to take care of your own health, which health service do you usually go to?" (Only the first service mentioned was recorded).

d) 95% CI: 95% confidence interval.

Note:

All values that exceeded 100 were adjusted to the maximum limit of 100.0; and all negative values were adjusted to –.

this service (61.5% – 95%CI 53.8;69.2) (Table 4). In contrast, most of the people who said they used this type of service three or more times in the last 12 months replied that they did not receive care the last time they sought this service (53.5% – 95%CI 36.4;70.5).

In the logistic regression analysis, sex did not show association with seeking PHC services as a first choice, compared to the other service levels in Brazil's Federal District. Concerning age, the association found in the crude analysis for greater use of PHC services among people aged 30-39, compared to younger people (18-29), was not significant in the multivariate model after adjustment for education level and having private health insurance. In relation to level of education, people who had postgraduate qualifications (OR=0.15 – 95%CI 0.04;0.59) or high school education (OR=0.37 – 95%CI

0.18;0.75) were less likely to seek PHC services when compared to people who had no formal education or who had only elementary school education. People who did not have private health insurance (OR=27.77 – 95%CI 10.61;72.70) were considerably more likely to seek PHC services when compared to those that did not have such insurance (Table 5).

Discussion

This is the first population-based telephone survey with the aim of describing the pattern of seeking health services by the adult population of Brazil's Federal District. We found that more than half of the population reported seeking private health services as their first choice, while seeking public services as a

Table 4 – Distribution of first choice health service use, according to respondent characteristics and reference to the use of Primary Health Care services in the last 12 months, Federal District, 2015^a

Variables	Use of Primary Health Care service as first choice ^b											
	None			Once or twice			3 or more times			Cannot remember		
	Proportion (%)	95% CI ^c		Proportion (%)	95% CI ^c		Proportion (%)	95% CI ^c		Proportion (%)	95% CI ^c	
Sex												
Male	64.3	57.5	71.2	23.2	17.3	29.1	10.5	5.5	15.5	1.9	0.4	3.5
Female	53.9	48.9	58.9	22.6	18.4	26.9	19.6	15.0	24.1	3.9	2.0	5.8
Age (in years)												
18-29 years old	64.4	56.2	72.7	18.7	12.4	25.0	14.4	7.9	20.8	2.5	0.5	5.0
30-39 years old	60.1	50.1	70.0	24.7	16.3	33.1	14.9	6.6	23.3	0.3	–	0.9
40-59 years old	53.0	46.3	59.8	24.2	17.9	30.6	18.3	12.5	24.1	4.4	1.5	7.3
≥60	58.7	52.7	64.7	25.0	19.1	30.8	10.9	7.1	14.7	5.4	2.6	8.3
Education level												
No formal education	82.3	57.4	100.0	9.8	–	28.3	5.2	–	15.2	2.7	–	8.0
Elementary school	36.3	25.6	47.0	33.1	23.4	42.8	27.3	17.6	37.0	3.3	0.5	6.0
High school	61.1	54.6	67.6	22.9	17.2	28.7	11.6	7.3	16.0	4.3	1.6	7.0
Higher education	71.4	66.3	76.2	16.0	12.3	19.7	11.1	7.1	15.2	1.5	0.4	2.5
Post-graduation	80.5	74.8	86.2	13.7	8.8	18.7	5.0	1.9	8.0	0.8	–	1.6
Not known/not informed	73.6	48.5	98.8	11.9	–	33.0	10.3	–	25.5	4.1	–	12.5
Health Insurance												
Yes	70.9	66.5	75.4	17.3	13.5	21.0	8.4	5.6	11.2	3.4	1.7	5.1
No	40.5	32.9	48.1	31.4	24.5	38.3	25.8	18.7	32.8	2.3	0.5	4.2
Primary Health Care service^d												
Yes ^e	–			61.5	53.8	69.2	34.5	26.7	42.2	4.1	2.0	6.1
No ^e	n.a. ^f			33.3	18.2	48.4	53.5	36.4	70.5	13.2	0.9	25.6
Unable to answer ^d	n.a. ^f			33.8	–	82.6	10.1	–	23.6	56.1	11.7	100.0
Total	58.8	54.5	63.0	22.9	19.3	26.5	15.4	11.9	18.8	3.0	1.7	4.2

a) Percentage weighted to adjust the sociodemographic distribution of the VIGITEL sample to the distribution of Federal District's adult population.

c) Answer to the question: "In the last 12 months, have you sought care at a Primary Health Care Unit (PHU) (in ordinary health care units or Family Health units) to take care of your own health? If yes, how many times?"

c) 95%CI: 95% confidence interval.

d) Answer to the question: "The last time you went to a health care center, did you receive care?"

e) ¹ The proportions correspond to respondents referring use of Primary Health Care services (Yes, n=501; No, n=78; Unable to answer, n=25).

f) All values that exceeded 100 were adjusted to the maximum limit of 100.0; and all negative values were adjusted to –.

first choice, particularly Primary Health Care services, was reported by around a quarter of interviewees, especially those with a low level of education and those who did not have private health insurance. Even in this more vulnerable group, seeking PHC as a first choice is not universal. Moreover, seeking PHC or Secondary Care services in the public system, as a first choice, had opposite and almost complementary distribution patterns in relation to age, education level and having health insurance.

Low use of PHC in Brazil's Federal District as indicated by this study, differs from the results of the 2013 National Health Survey, when most of the Brazilian population (47.9%) chose PHUs as their first choice of health service.¹⁴

This apparent discrepancy emphasizes the need to discuss not only determinants related to service users' choice (sociodemographic and cultural indicators, among others). Factors responsible for lack of options due to low PHC coverage in the Federal District also deserve attention. It is noteworthy that besides service

Table 5 – Factors associated with seeking Primary Health Care services as first choice, Federal District, 2015

Variables	Crude model			Adjusted model		
	OR ^a	95%CI ^b	P-value	OR ^a	95%CI ^b	P-value
Sex^c						
Male	1.00					
Female	0.93	0.59; 1.48	0.761	–	–	–
Age group (in years)^d						
18-29	1.00			1.00		
30-39	2.48	1.22; 5.01	0.012	1.54	0.61; 3.90	0.360
40-59	1.52	0.81; 2.86	0.194	0.99	0.43; 2.29	0.974
≥60	0.90	0.45; 1.81	0.774	1.02	0.41; 2.55	0.965
Education level						
No formal education; or elementary school	1.00			1.00		
High school	0.30	0.18; 0.52	<0.001	0.37	0.18; 0.75	0.006
Higher education	0.13	0.07; 0.23	<0.001	0.45	0.19; 1.05	0.065
Post-graduation	0.02	0.01; 0.08	<0.001	0.15	0.04; 0.59	0.007
Health Insurance						
Yes	1.00			1.00		
No	36.93	15.70; 86.84	<0.001	27.77	10.61; 72.70	<0.001

a) OR: odds ratio.

b) 95%CI: 95% confidence interval.

c) The "sex" variable was not kept in the adjusted model because it was not statistically significant.

d) The "age group" variable was kept in the final adjusted model (even though it was not statistically significant), given the interest in its adjustment and comparison with other studies.

Note: The odds ratios, their respective 95%CI and statistical significance (p-value) were estimated by logistic regression models, taking as a reference group the aggregate of all the other higher complexity services. P-value considered to be statistically significant: p<0.05.

use indicators, access to the Brazilian public health system should be evaluated according to coverage, especially when it comes to the FHS.⁹ It is important to stress that there is a clear intention to expand the FHS in the Federal District,¹⁵⁻¹⁷ however, the strategy's low coverage not only persists but is also worsening: 28.6% in 2012, 14.3% in 2013.^{18,10} In recent decades, there has been a significant increase in FHS coverage in Brazil as a whole, from 50.9% in 2008 to 53.4% in 2013, while its Federal District was the Federative Unit with one of the lowest coverage levels in the same period.¹⁰ More than half of the population studied said they had not used any PHC service in the last 12 months. Apart from the reasons already mentioned, this can also be explained by availability of services and medical appointments in private clinics being greater than that of PHC services in the Federal District, in addition to high health insurance coverage (31.9%) above the Brazilian average according to the 2013 National Health Survey.¹⁹ The heavy demand for Secondary Care services (represented by almost half of the interviewees) and

for Tertiary Care (more than a quarter) also deserves consideration. It is to be expected that a scenario characterized by the predominance of use of public hospital care services^{13,20} and low PHC coverage,^{10,18} as in the Federal District, will directly influence the pattern of health service use. A study by Pires *et al.* identified that people in the Federal District use hospitals because they are close to their home or work place, and that most of the procedures carried out in these Tertiary Health Care facilities refer to Primary Care.¹³ This evidence ratifies, yet again, that the demand for health services is determined and configured by the characteristics of its supply.

According to some studies, poorer people need health care more frequently; nonetheless they have limited access to private health insurance and use fewer health services. Nevertheless, we found that part of this population seeks the private sector to meet their demands, despite the fact that this decision compromises their family budget, thus contributing to increased health inequalities.²¹

Among the results of this study, around 9% of those who had private health insurance reported they usually sought public health services. The proportion of health insurance beneficiaries in Brazil has increased in recent years and reached 27.9% in 2013. This increase, which has been rising according to data from the 2008 National Household Sample Survey (PNAD) and 2013 National Health Survey, is also found in the ever greater use of health insurance services in the country's Midwest region.⁹ In turn, the population registered with the FHS has also increased in all country, so that SUS now has a greater share in health care delivery.⁹ Pilotto and Celest state that being registered with the FHS has increased the use of public services, with a more significant effect among people with private health insurance.²² Moreover, there has also been an increase in the use of SUS services by people with more schooling, namely those who have private health insurance.²³ This evidence corroborates the findings of this study with regard to use of SUS services by health insurance beneficiaries. This result can be partly explained by the fact that the insurance plans of some of these individuals do not provide complete access to all private health services.²³ Although private insurance providers offer a large variety of service coverage, they may not meet the expectations of their beneficiaries when they are in need, forcing them to turn to public health services to get certain types of treatment, for example.^{24,25}

Authors of other studies contribute to these reflections when they demonstrate that the Brazilian health system has a complex network of service providers and service buyers, structured according to the logic of their particular and selective supply and demand, in which people with private health insurance have greater access to services in general and a higher rate of service use, when compared to those who do not have such insurance.^{2,4,26}

There has been an increase in the rate of people using SUS for appointments and hospitalization. Notwithstanding, large inequalities persist in the use of health services between the population served by SUS and the population that has private health insurance, besides the increase in public health service use by people with private health insurance.⁶ A further finding is that people who are health insurance beneficiaries tend to use more health services in general; however, this advantage is enjoyed by those

who least need it, thus deepening health inequalities.²⁷ Our study identified that not having private health insurance and having a low level of education are factors associated with the habit of seeking a PHC service, according to the adjusted analysis. We were able to quantify the reduction gradient of seeking (i) public health services and (ii) PHC services in particular as a first choice as the service user's level of education increased: being 76.3% and 73.5% among those with no formal education, and 5.4% and 2.2% among people with postgraduate qualifications. Other authors have confirmed that level of education is an important factor for health service use, given that besides representing an income proxy, people with a higher level of education are probably more willing to invest in their own health. Other characteristics apart from income (such as education level and access to health insurance) also appear to be even more relevant determinants of health service use.^{3,8,24,25}

Health care access inequalities persisting in Brazil's Federal District become even more pronounced if we consider both our results and also the evidence found and analyzed in other studies. Those studies also point to effective access to PHC as the factor most contributing towards reducing the region's socioeconomic inequalities, besides favoring a reduction in the hospitalization rate and the improvement of health indicators, thus serving as an important promoter of health equity.^{28,29}

It is reasonable to suppose that low demand for PHC is, to some extent, a reflection of health policy management in the Federal District, due to frequent health service manager turnover and abrupt changes in strategies in force, as well as a certain contradiction between the discourse in defense of PHC and continuing high expenditure on hospital and outpatient care. The evidence is testimony to a strong characteristic of Federal District Health Department (SES/DF) management: it continues to opt for longstanding policies, such as investing in hospitals, for example.^{14,30}

The average socioeconomic profile of the Federal District's population, namely high purchasing power and high education level, may explain, albeit partially, the fact that more than half of the people living in the Federal District said they had health insurance and seek private health services as their first choice. This result is higher than that found for Brazil as a whole, where only 20.6% of interviewees said they seek private

health care, according to the National Health Survey.¹⁴ Moreover, the proportion of people with health insurance in our study is well above that found (39.1%) by the same survey for the Federal District in 2013.²³ This result may reflect a real increasing tendency in this indicator in recent years, especially in the Midwest region;²³ nevertheless, we do not discard the possibility of residual selection bias with oversampling of the higher income population.

This study has limitations to be considered. The most important one refers to possible selection bias resulting from the use of landline telephone account records in the Brazilian state capitals in order to draw the sample. In order to minimize this bias, VIGITEL – both the national survey and the evaluation – uses the weighting and post-stratification method with the objective of adjusting the sample distribution (population in the state capitals with a landline telephone) to the characteristics of the population living in each capital, according to data from the demographic census and intercensal projections. Even though this care is taken with the sample, some residual selection bias may persist. In this study, only public health services were classified as having a PHC level. Although there is a possibility of classification error, in the event of a private outpatient care service having PHC attributes, this is very unlikely.

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In conclusion, we found that people in the Federal District who have a low level of education and no health insurance are those who seek PHC services as their first choice. Notwithstanding, different to what might be expected for this more vulnerable population, PHC service use is far from being universal. The main hypotheses discussed refer to the conditions of health service supply in the Federal District: low PHC coverage and high concentration on hospital services, these being characteristics that are incompatible with the health demands in a territory with large social inequalities. Therefore, we emphasize the need to strengthen Primary Health Care in Brazil's Federal District in an effort to achieve health equality in the region.

Authors' contributions

Poças KC contributed to the conception and design of the study, data analysis and interpretation and writing the first version of the manuscript. Perillo RD, Bernal RTI, Malta DC and Duarte EC contributed to data analysis and interpretation and critical revision of the manuscript. All authors have approved the final version of the manuscript and declare themselves to be responsible for all aspects of the study, ensuring its accuracy and integrity.

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