

Demand for Health Care in Brazil: a preliminary analysis by regions*

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Introduction:

Political, demographic and epidemiological changes characterized Brazilian population in the second part of the 20th century. These changes have had a drastic effect on health outcomes.

The demographic transition in Brazil follows the demographic transition of some Latin America countries (Chile, Dominican Republic, etc), occurring in approximately 30 years. The decrease in mortality levels preceded the decrease in fertility levels, which rising the life expectancy in approximately 45 years for both men and women, due mostly to a decline of infant mortality (Cunha et al, 2000); the current estimate infant mortality rate for Brazil is 32/1,000 live births, with regional differences - while in the Northeast is 52.4, in the South is 17/1,000 live births - (IBD, Brazil, 2001). The onset of fertility levels (measured by the total fertility rate - TFR) began in the mid-1960s, but only in the 1980s, it presents a significant decline: from around 4 children per women in 1980s to 2.2 children per women in 2000 (IBD, Brazil, 2001).

In regard to epidemiological transition, health throughout the life course in Brazil shows a more complex picture similar of the *double burden* described by Frenk and colleagues (1991). They postulate that in many societies, “heterogeneity in the pace of the epidemiologic transition among different social strata or geographic regions produces a *protracted and polarized* transition model marked by overlap between stages” (Salomon and Murray, 2002, pp 224). Data for 1999 show an increase in the incidence of tuberculosis (48 per 100,000 inhabitants) associated to poverty and also HIV/AIDS. The most common causes of death and hospitalization among the adult population for the country as a whole (excepting for delivery and birth) are

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cardiovascular diseases (DATA-SUS, 2000) while infant and maternal mortality are still at high levels (IDB-Brazil, 2001).

Parallel, and by the end of the Military Government, a pool of social mobilization led to the 1988 Constitution Revision that set for the Universal Health System (SUS), which is a universal, integral and decentralized policy that includes social control mechanisms (*accountability*) represented by health councils that operate in all levels - national, state, local (Barros et al, 1996).

The SUS (Universal Health System) was designed to offer and also regulate the supply of health care of the private sector. It is organized in the federal, state and municipal levels of administrative power, under which municipalities are supposed to take responsibility for the provision and administration health care from a budget of the federal government. Data from PNAD-1998 (National Household Survey), revealed that 75.5% of the Brazilian population had no health insurance, then the SUS became the main provider of health care for the majority of the of Brazilian population.

Considering this scenario, and in spite of certain weakness of the data on health, morbidity and mortality¹, studies about health care outcomes, morbidity structure and the supply of health care at hospitals and outpatient's services have been conducted in Brazil, although some of them are only looking at the SUS users.

One recent study conducted in Brazil was *Female mortality and morbidity in Brazil 1977-95* (organized by Berquó & Cunha, 2000), which analyzed data from the Mortality Health System and DATA-SUS. Although there are some limitations to the data, it confirms the trend of cardiovascular diseases and neoplasm to be the most common causes of death and hospitalization² in all Brazilian regions. Descriptive studies about inequality and health (Nunes et al, 2001) and ecologic study about epidemiology of the inequalities of health (Duarte et al, 2002) have focused on the relationship between health/mortality indicators and socioeconomic variables, and supply of health services. Few researchers are discussing the self-perception of health and its relation to demand for health care in Brazil (see for instance Lacman, 1997).

¹ In 1998, the proportion of undefined cause of death for the whole country is about 15% (Nunes et al, 2001).

² This calculation excludes hospitalization for delivery/births.

This preliminary investigation tries to understand the nature of the relationship between health/illness status reported and the demand for health care by regions in Brazil. We also want to know how chronic diseases and socio-demographic characteristics mediate this relationship. Two steps constitute this investigation: first, an examination of the demand for health care based on positive perception of sickness according to regions in Brazil; and second, an examination of *the repressed demand* based on the negative responses to the same question. This paper focuses on first step.

Some considerations about the multidimensionality of the demand for health

Demand for health care is a multidimensional category, composed by biological, social and cultural elements. It is a process of making decision based on individual's perception of medical symptoms and need orientated toward action. According to Andersen & Newman (1973) it is necessary to pay attention in both individual and societal determinants of the utilization of health services rather to consider it a type of individual behavior. These authors studying the characteristic of the health care utilization point out that the societal determinants of utilization affect the individual determinants both directly and through the health service system.

Need is clearly a factor that account for difference in demand and using health care, which is defined according to sociodemographic characteristics (age, sex, race/ethnicity). Usually, only two forms of measuring need are considered, self-reported illness and disability (Anderson & Bartukus, 1973). As previously discussed, health is a relative concept shaped by the medical model and extremely difficult to define. The legitimate definition of illness is a medical responsibility, occurring after physical examinations and tests, which varies substantially with the access to technology and the supply of health services. However, individuals may feel sick and yet not look for medical services or individuals do not recognize needs for medical attention their ailment. In other cases, individuals have to face situation in which neither the individual nor the doctors are able to explain what is happening. Therefore, individuals are not always good judges of their health status and, health status also depends on the

availability of medical services. The lack of health can mean limitations in one's everyday life; it can assume mental or physical characteristics and the assessment of health can be made in different ways. According to Rogers et al (2000), the concept of health is an evasive one and has more than one dimension.

The perception of health/illness also relates to engaging in preventive behavior and self-care. The importance of self-perceived health status incorporates a clinical framework, analyzing “the social assessment and treatment of disease, health conditions and the social environment of individuals” (Rogers et al, 2000, pp.178). These authors use self-perceived health as opposed to medical determinations of health/illness as a predictor of mortality based on the 1990 NHIS. They found that self-perceived health is strongly correlated to the risk of dying. Kennedy et al (1998) reviewing of 27 studies have shown that questions about self-perceived health are strong predictive validity for mortality, independent of other psychological, behavioral and psychological effects.

In order to incorporate the notion of *health as right*, in which health is re-conceptualized in macro-level terms, i.e., more than a biological status of abnormality (Luz, 1994), health/illness should be socially recognized as an integral and collective set of conditions of existence, impacted by socioeconomic and political status. In this respect the SUS was supposed be the way of promoting health as a universal right, indeed to incorporate the wide dimension of health as an integral process rather than a specific pathology.

Although the SUS became a reality, health professionals, academics and policymakers are still facing the difficult task of implementing and evaluate its efficiency and quality. While the preventive practices have been deemed successful, the health/illness process remains a curative and medicalized one, kept in place by the powerful medical model and in some places mediated by paternalistic public policies³. The decentralization of actions and popular participation promoted by SUS at local levels has had a greater impact on epidemiological patterns than on the incorporation of the conception of health as an integral phenomenon. The self-reported health status observed in the PNAD-98 shows that 79% of the Brazilian population considered their health status good and very good and only 3.6% as bad or very bad. This level of

satisfaction seems to be at least inconsistent with the current social indicators for that country, which signalizes to a weak understanding of social dimension of health.

Spatial and geographic factors are also important elements defining demand for health care. Weiss et al (1970, 1971) and Bashshur et al (1973) reveal that distance from health care affects both the initial choice of services and the frequency and mode of their use. Great distances between households and health services interfere substantially on the timing of seek health care, especially if it is associated to lower socioeconomic status. As an example, the rural persons may seek and use less health services than urban individuals because either the distance or the isolation of their households, which can be mediated by community resources (Andersen & Newman, 1973). Yet, geographical/space category is an important analytical tool to be applied on national investigation, because clearly it permits to incorporate the multiples aspects of the social organization, where each spatial category can represent a specific way of social organization (Nunes et al, 2001).

Economic factors are crucial in accounting for variation in the demand for health services because it defines the ability of paying health insurance or using a public health service. Klem (1965) outlines that persons with insurance coverage were more likely to see a physician than those with little or no health insurance.

Availability of health services (supply of health services and physicians) is another important element: the more services and doctors exist, the more population look for them. According to Anderson & Bartkus (1973), some researchers (Wriki, 1966 & Andersen, 1968) have included indices of the supply of physicians and hospitals in their models of demand for health care. Lancman (1997) studying the possible association between the presence of psychiatric hospitals and the demand for health care in four municipalities in Sao Paulo (Araraquara, Sao Carlos, Franco da Rocha and Ferraz de Vasconcelos) found an increase in both hospital admittance and the outpatient consultations in mental health. The program of prevention and treatment of people with hypertension conducted of the *Health Family Program*⁴ in some municipalities in Brazil seems to be other useful and current example: one preliminary activity of this program

³ More details see Caetano's (2000) dissertation: Sterilization for Votes in the Brazilian Northeast: the Case of Pernambuco.

⁴ This program has been implanted in the whole country since 1998.

addressed to adult population is to identify signs or symptoms of hypertension and diabetes, a preventive action against the most common chronic and degenerative diseases. It can change the self-perception and provoke demand among people who had previous complains and also among those who had not.

One less discussed element is the ability of the health service in solving the problem at the first attempt, which I call *resolvability*. The incapacity of the health service in responding to a specific problem can lead individuals to postpone or avoid a next trial in seeking for health care, unless they are experiencing an emergence situation; a good example is the peregrination of woman in labor looking for a hospital to have a baby⁵. Although this element is not well studied, we believe that it can repress the demand particularly among people who had chronic diseases, because they seek health care more frequently and also need a follow-up for certain types of diseases.

Socio-demographic factors, indirectly affect seeks and utilization of health services. “Demographic variables are important basis for distributing health services under a system of equitable distribution because of the well established relationship of age, sex, and marital status to physical need, disease pattern, health maintenance, and subsequent use of services”(Andersen & Newman, 1973, pp. 117). Some studies (Samora et al, 1962, Suchman, 1965) found education and socioeconomic status to be related to knowledge concerning etiology, diagnosis and symptomatology of common diseases and demographic factors to be related to knowledge about disease, other dimensions of the individual’s medical orientation and need. The level of schooling is constantly associated health behavior, mortality and morbidity pattern and also the quality of information about cause of diseases and death.

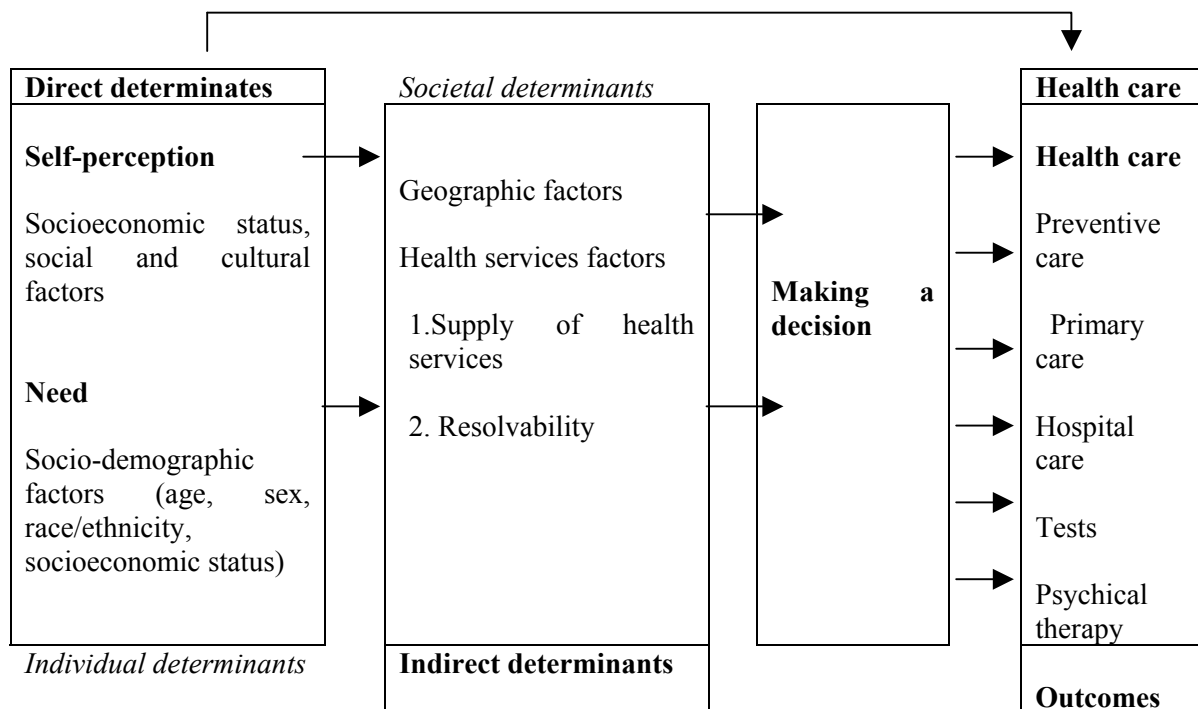
Measures of inequality in Brazil confirms that the population which present lesser than four years of schooling have a lower health service utilization, a worse quality of health care, and also a precarious level of registration of the cause of death in the death certification (Nunes et al, 2001). Rogers et al (2000) postulate that income and education are baselines variables to understand the health outcomes. It can interfere on the perception of the disease, and on the way of seeking health care and treatment.

⁵ Peregrination is a Brazilian expression to describe women in labor who have problems in finding a place to have a baby. There are different factors involved, which are not objecting of discussion here.

Finally, it is important differentiate the idea of access and structure discussing by Andersen & Newman (1973) from the idea of seeking health care introduced in this investigation. They conceptualize access as the means through which the patient gains entry to the medical care system and continues there, and structure as characteristic of the system that determine what happens to the patient following entry to the system. The focus of this investigation is the primary component of the health care; i.e. the factors related to the process of make a decision of looking a health service.

Seeing that, self-perception and need represent our direct determinants of seeking health care (also called individual determinants), however the process of make a decision is mediated by spatial distribution, supply and resolvability (societal determinants). All these elements work together supporting the individual/familiar decision, as we are trying to demonstrate in this conceptual model.

Figure 1.
Diagram of demand for health care



2. Material and Methods:

2.1. About Brazil:

The Brazilian population in 2000 was 169,590,693, 81 % were living in urban areas. It has 26 states distributed into five macro-regions: North, Northeast, Southeast, South and Center-West (see **illustration 1**). Each region has specific characteristics in terms of socioeconomic and demographic characteristics, such as, wealth and development, level of urbanization, race/color and indigenous population distribution and supply of health services (public and private). In the whole country, the poverty rates vary from 10% in the richest São Paulo (Southeast) to 64% in the poorest Maranhão (Northeast). Of five Northeast's states, 50% of their population are living under poverty line. The states of North and Northeast also present the lower level of schooling, while the South and the Southeast have the highest ones (Nunes et al, 2001). The North is the largest region and it has the lower demographic concentration and the Southeast is the most urbanized; it contains the two Brazilian mega-cities, Rio de Janeiro and São Paulo.

Table 1.
Some characteristics of the population of the Brazilian's macro-regions

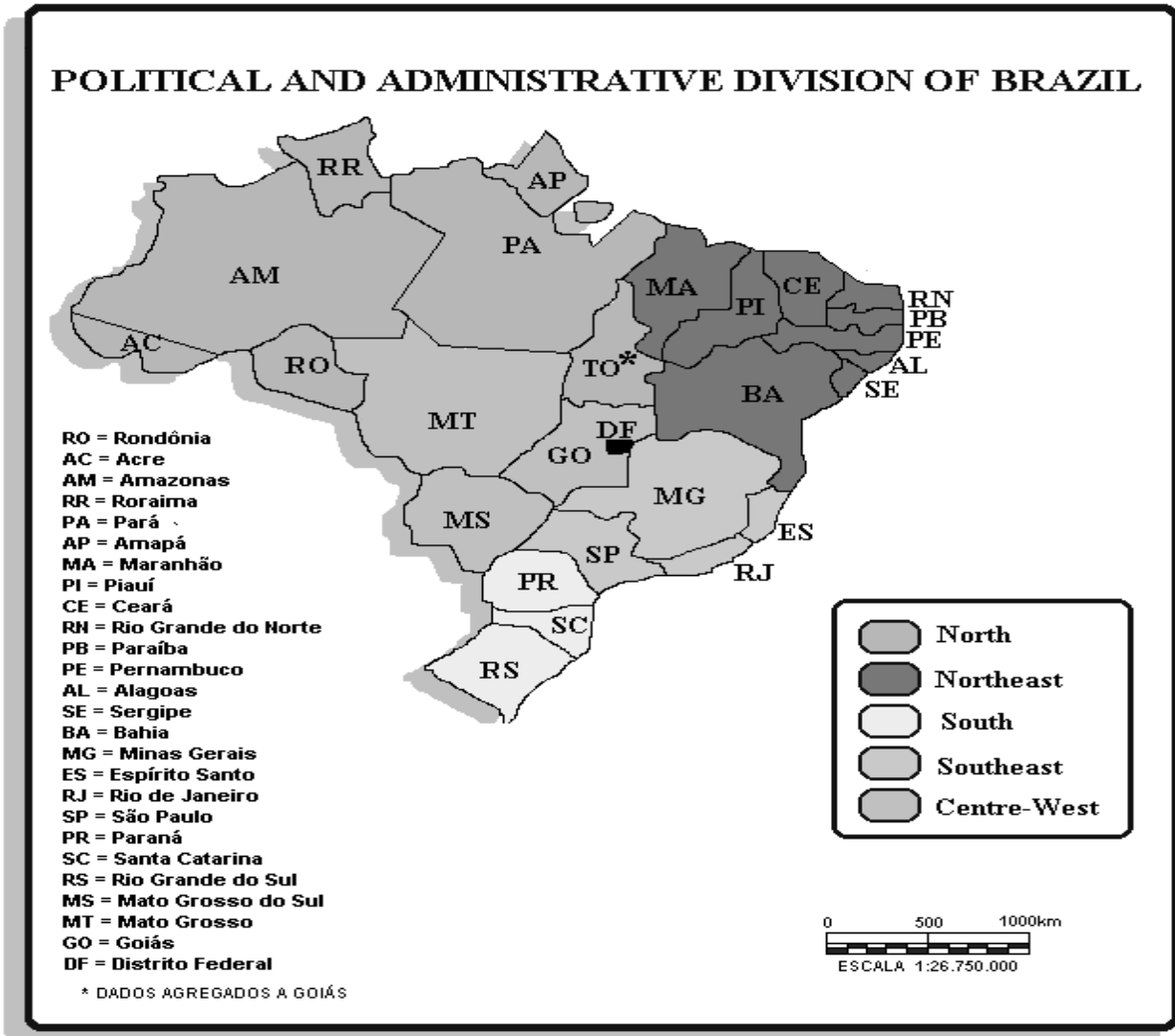
Regions	Population		Infant Mortality Rate/1000live births	Life expectancy at birth	
	Rural	Urban		Male	Female
North	3,888,339	9,014,365	35	65	71
Northeast	14,766,286	32,975,425	58	62	68
Southeast	6,863,217	65,549,194	23	65	74
South	4,875,617	20,321,999	22	67	74
Center-West	1,543,752	10,092,976	25	66	72
Brazil	31,865,211 (19%)	137,953,959 (81%)	36	64	72

Source: OPAS, OMS, IPEA, 2001. IBGE, Brazilian Census, 2000.

Illustration 1.

Brazil macro-regions and states

(Source: Pares, 2000).



2.2.Data and Design:

This investigation is a cross-sectional study using PNAD data (National Household Survey) for 1998. PNAD is an annual household survey conducted by IBGE. Two different parts compose the PNAD survey, a basic questionnaire, which collects demographic, and SES data, and a specific questionnaire, which is called supplement. Every year the PNAD supplement is related to a specific area, such as education, employment, or social security. In the 1998 PNAD there were 112,434 households interviews, which represents approximately 344,975 people of all ages. Sociodemographic characteristics, insurance and self-reported morbidity were included. This large sample guarantees its national representativeness, except for in the rural area of the North region.⁶

2.3. Measuring Section:

Considering both the advantages and limitations of self-perceived morbidity previously discussed, this preliminary investigation focuses on the adult population aged 10 and more, who responded positively to the question of activity limitations due to health problems: *Have you have any kind of health restrictions or limitations in the past two weeks?* It yields a sample of 7,284 men and 10,696 women (6.3% of the total sample). Based on these positive responses, we intent to examine the demand for self-reported health among adults population. Using a logistic regression (through SAS statistical program), our dependent variable is *people who sought health care in the past two weeks*; it means the first attempt in seeking health service (see in the **Figure 2**).

The main independent variable is geographical/spatial characteristic. Another independent variable is the self-reported presence of chronic disease. Since the chronic diseases are not classified according their intensity or potential effect on mortality (tuberculosis, bronchial asthma, cancer, backache, arthritis, cirrhosis, diabetes are put in the same category), we arbitrary divided them in two distinct categories: chronic grave and chronic non-grave⁷. Other important predictor of demand is the supply of health care, and in this model is represented by the number of physicians, beds and outpatients units of the SUS (Nunes et al, 2001). In addition, demographic variables and

⁶ The North region sometimes presents problems of representativeness.

socioeconomic status are included (mediating variables) as showed in the Table 2. In the respect to sociodemographic variable race/color, we used the same classification based on self-identification of color: White, Preta, Parda (an intermediate between Black and White) Yellow (Asian), and Indigenous. We did not include variables of resolvability in this moment because we are still constructing them.

Table 2.
Variables used in the logistic regression analysis of 1998 population who demand health care by regions in Brazil, PNAD-98.

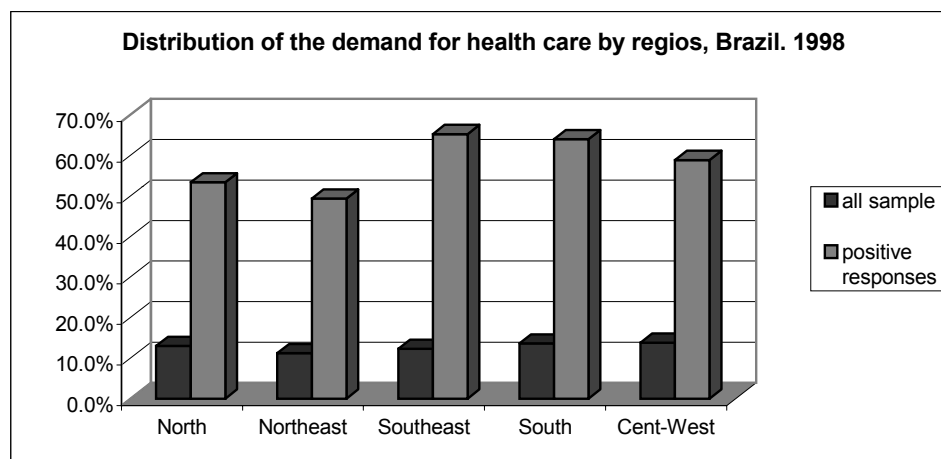
Variables	Measurement
<i>Dependent variable</i>	
Sought health care	Yes
<i>Independent variables:</i>	
<i>1. Geographical characteristics</i>	
Region of residence	North*/Northeast/ Southeast/South/Center-West
Place of residence	Urban/rural*
<i>2. Supply of health care</i>	
Physicians	Number of physicians per 1,000 inhabitants
SUS's beds	Number of SUS's beds per 1,000 inhabitants
SUS's outpatients units	Number of SUS's outpatients units per 10,000 inhabitants
<i>2. Demographic/individual characteristics</i>	
Age	Years
Sex	Female/male*
Race/color	Black/parda/white*
Chronic diseases	Chronic grave Chronic non-grave
<i>3. Socioeconomic characteristic</i>	
Income	Value in real (Brazilian currency)
Education	Years of study (5 categories: less than 1 year*)
Health insurance	Yes/no*

*Reference category

⁷ It is only an artificial classification because it is possible to find simultaneity and also different levels of severity even among those who have non-grave chronic diseases.

Results

Figure 2



Source: PNAD, 1998.

There is little variation in health seeking behavior among regions; the highest difference (21%) is between the Center-West and the Northeast regions. Using the sample of people who reported limitations in the past two weeks (see in **Table 2**), the difference between the North and the Northeast regions is 7%, while it is about 32% between the Northeast and the Southeast regions, which demonstrates the level of inequality across the country named by one *many Brazis*.

Table 3 presents the percentages of individuals in the survey who sought health care in the past two weeks prior the interview, among those who previously reported limitations due health problems during the same period. White and *Parda* women are more engaged in seeking for health care than Black women and men; the group who reported chronic grave diseases sought health services more than those who reported chronic non-grave diseases. Comparing individuals who sought health care according to their years of education, people who have 4 to 7 years of education are more likely to seek health care than anyone else. The group who has more than 15 years of education is either less likely to look for health care or healthier.

In terms of geographical/spatial factors, people who live in the North and the Center-West are looking for health care less than those who live in the other three regions, although they have different coverage of the public health services: while the Center-West is expected better living standing than the on, the North is closer to the

Northeast. Indeed the Center-West presents better socioeconomic indicators than the North and Northeast. The South and the Southeast regions show the better health indicators than anywhere else in the country, and also contain the higher percentage of population who was seeking health care. The supply of health services is in general more concentrated among the South, Southeast and Center-West regions.

Finally, regarding place of residence, living in urban areas increases the chance of looking for health care over living in rural areas. Even considering that the sample presents some problems in distinguishing between rural/urban territories in the North and Center-West regions, these findings are consistent with empirical observations of the national health system.

Table 3.
Percentages of the adult population who sought health care according to
Independent variables, Brazil, 1998

Independent Variables	Percentages (%)
Sex	
- Female	61.58
- Male	38.42
Race/color	
- White	52.22
- Parda	41.06
- Black	6.01
- Indigenous	.42
- Asian/yellow	.29
Chronic disease	
- Chronic grave	52.53
- Chronic non-grave	51.22
Education	
- Less than 1 year	19.73
- 1- years	19.35
- 4-7 years	32.02
- 8-11 years	12.63
- 12-14 years	12.21
- 15 and more	4.06
Supply of health care	
Number of physicians	
North	.38
Northeast	.85
Southeast	2.34
South	1.57
Center-West	1.43
Number of beds of SUS	
North	.68
Northeast	.94
Southeast	1.05
South	1.06
Center-West	1.18
Number of outpatient units of SUS	
North	3.74
Northeast	3.74
Southeast	2.48
South	4.92
Center-West	4.03
Geographical/spatial	
- Region North	1.24
- Region Northeast	7.26
- Region Southeast	12.06
- Region South	9.20
- Region Center-West	2.99
Place of residence	
- Rural	85.51
- Urban	14.49

Source: PNAD-98 and Nunes et al, 2001.

Table 4 shows the odds ratios of seeking health care for the adult population who self-reported health problems in the past two weeks, focusing on the five macro-regions and taking into account the other variables in the successive models. Model 1 provides odds ratios for macro-regions. It shows that in the South, Southeast and Center-West people seek more health care than in the North while in the Northeast people seek less. Although there are not great disparities among the South, Southeast and Center-West, Southeast represents the highest proportion of seeking health care. People who live in urban areas are 61% likely to seek health than those who live in rural ones.

Model 2 displays the baseline relationships between seeking health care and geographic characteristics, controlling for socioeconomic factors and health insurance. Although the relationships remain, living in an urban area becomes less important in defining who are seeking health care. The South, Southeast and Center-West do not demand as much health care in the Northeast, the demand increased slightly. The inclusion of these sociodemographic characteristic variables alter the magnitude of the association between geographical characteristics and demand for health care, but does not change the overall pattern of the relationship.

Model 3 adds demographic and individual factors (chronic disease) completing the set of independent variables, and it reveals that the relationship between demand for health care and geographic characteristics remains moderate. The 34% higher odds ratio for demand for health care for those who live in urban areas is important because 81% of the population living in that areas. In terms of macro-regions, people who live in the South and Southeast are more likely to demand health care than in the Northeast and in the Center-West. Positive effects of education and health insurance, as well as being women and reporting chronic grave disease are all apparent, while there are negative effects of being Black or Parda and no effect of income.

Model 4 brings supply of health services, and it changes the demand for health services according to the presence of physicians, beds and outpatient's units. For the whole country, the ratio of physician is 1.6 (Nunes et al, 2001) and 1.4 (Duarte et al, 2002), which is superior of the WHO's average of 1 physician per 1,000 inhabitants, however this exceeding amount does not represent an adequate and equal coverage

across the regions, as we can see in the table 3. The ratio of beds per 1,000 inhabitants is lower for North and Northeast while the ratio of outpatients units is lower for the Southeast.

In this way, the Southeast region presents about 3.5 times more physicians than the North region and seeking health care is positive related to the number of physicians per 1,000 inhabitants and number of outpatient units of the SUS per 10,000 inhabitants, but it is negative associated with the number of beds of the SUS per 1,000 inhabitants.

Table 4.
Odds Ratios of *Seek Heath Care* among the Adult Population, Brazil. 1998

	Model 1	Model 2	Model 3	Model 4
<i>Geographical characteristic</i>				
Region of residence				
- North	ref.	Ref.	ref.	ref.
- Northeast	.84	.88	.91	1.08
- Southeast	1.38	1.24	1.21	1.01
- South	1.24	1.15	1.10	.88
- Center-west	1.10	.96	.95	1.01
Place of residence				
- Urban	1.61	1.4	1.36	1.34
- Rural	ref.	ref.	ref.	ref.
<i>Supply of health care</i>				
Number of physicians/1,000 inhabit				1.64
Number of SUS's beds/1,000 inhabit				.77
Number of SUS's outpatient units/10,000 inhabitants				1.20
<i>Socioeconomic factors</i>				
Income (continuous)		1.00	1.00	1.00
Education (years of schooling)				
- Less than 1		ref.	ref.	ref.
- 1 to 3		1.21	1.22	1.18
- 4 to 7		1.41	1.41	1.33
- 8 to 10		1.42	1.43	1.38
- 11 to 14		1.57	1.57	1.54
- 15 more		1.50	1.50	1.48
Health insurance				
- Yes		1.48	1.46	1.43
- No		ref	ref	ref
<i>Demographic/individual factors</i>				
Sex				
- Male			ref.	ref.
- Female			1.20	1.18
Age (continuos)			.99(-.002)	.99(-.002)
Race/color				
- Black			.92	.92
- <i>Parda</i>			.89	.98
- White			ref.	ref.
Chronic disease				
- Grave			1.25	1.23
- Non-grave			.97	.98
Intercept	-13	-32	-37	-92
-2*log-likelihood	11,030.210	11,030.210	11,030.210	11,030.210

All coefficients p< .0001
Sample size=18,036.

Discussion/Conclusions

This preliminary analysis on the demand for health care in Brazil shows that geographical regions differentiate it. Based on the conceptual model, seeking for health care is a complex chain that integrates all the elements early discussed. This chain begins with the population who self-reported health limitation. The process of make-decision is a product of all the mechanisms working together.

Data show different proportion of demand between the Northeast and the Southeast/ South, the extremes regions in terms of wealthy and development, but also in spatial distribution. Although the North presents the lower demographic concentration, which can provoke a certain degree of isolation and altering the access to health and goods, the Northeast is the population who is less likely to seek health care.

The differential between the Northeast and the South/Southeast requires distinct explanations. It might be a consequence of elements that compose the chain of the demand for health such as, self-perception of sickness (associated to lower level of socioeconomic status), distinct pattern of morbidity and mortality and resolvability. Although there is a known improvement in the supply of health services at local levels in terms of health centers, hospital assistance and number of health professionals, there is no information here about the ability of these instances in solving a health problem at the first time (SIA-SUS, 2000). Unfortunately, there is no variable related to resolvability in this model.

The unexpected situation of the Center-West region found in the second and third model disappears if supply of health care is added. However, in the South region, controlling for supply of health services, it switches its probability of looking for health care. That means, people who live in the South, a wealthy region in Brazil, become less likely of seeking health care than those who live in the others. A combination of mediate factors or the absence of one element in the model, the resolvability of the health services, could be associated with these results. One possible hypothesis can be the fact that the number of beds and outpatient units are limited to the public institutions. Since the South is a more developed, its population is more likely to pay insurance and also to access health care directly by out-of-pocket payments, which can alter the effect of the SUS over the demand for health of the general population. Other

hypothesis is that the supply of health care reduces the demand due to a good resolvability of the health services.

Seeing that, and turning back to the early notion of health as right and a complex entity that should be socially recognized as an integral and collective set of conditions of existence, if we are using demand for health care as a proxy of the perception of the health/illness process, the Brazilian population present different patterns of this phenomenon. Current indicators are showing a huge numbers of people who are going to the emergencies rooms due to complications of chronic diseases such as stroke and heart attack due to hypertension, complications of diabetes, and cancer in advanced stages. Even in cases of adult population with acute diseases like pneumonia that does not need hospital care, something is obstructing the diagnosis and treatment, leading to a large number of unnecessary hospitalizations (DATA-SUS, 2000). Whether is the length of the queues, the lack of physicians, or the incapacity of understanding that a disease is installed, we are not sure. The models show that better educated and wealthier groups, white female as well as those who have chronic grave disease is positively related to seek health care. The ratio of physicians and outpatients units is also associated with more demand for health, while the ratio of beds is negative associated with.

For long time, health policy in Brazil was vertical and fragmented one, conducted by the Ministry of Health by its innumerous foundations, like National Health Foundation (responsible for preventive care), National Institute of Health Assistance (responsible for curative care), and so forth. Now, a national movement is re-orienting the health policies in order of being equal and equity, in which the individuals are different among them and should be treated differently to minimize the prevalent inequality. These data suggest that effective intervention should incorporate all elements that constitute demand for health, recognizing its regional specificity and inequity. In short-term, it should be addressed to the coverage and quality of the health services, which can change the effects of supply and improve the resolvability in the chain of the demand for health care.

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