

Characterization of assistance among philanthropic hospitals in Brazil

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Keywords

Philanthropic hospitals. Brazilian Health System. Hospital administration. Delivery of health care.

Abstract

Objective

To characterize the Brazilian philanthropic hospital network and its relation to the public and private sectors of the *Sistema Unico de Saude* (SUS) [Brazilian Unified Health System].

Methods

This is a descriptive study that took into consideration the geographic distribution, number of beds, available biomedical equipment, health care complexity as well as the productive and consumer profiles of philanthropic hospitals. It is based on a sample of 175 hospitals, within a universe of 1,917, involving 102 distinct institutions. Among these, there were 66 Brazilian Unified Health System (SUS) inpatient care providers with less than 599 beds randomly included in this study. Twenty-six of the twenty-seven SUS inpatient care providers with at least 599 beds, as well as ten institutions which do not provide their services to SUS, were also included. This is a cross-sectional study and the data was obtained in 2001. Data collection was conducted by trained researchers, who applied a questionnaire in interviews with the hospital's managers.

Results

Within the random sample, 81.2% of the hospitals are located in cities outside of metropolitan areas, and 53.6% of these are the only hospitals within their municipalities. Basic clinical hospitals, without ICUs, predominate within the random sample (44.9%). Among the individual hospitals of the large philanthropic institutions and the special hospitals, the majority – 53% and 60% respectively – are level II general hospitals, a category of greater complexity. It was verified that complexity of care was associated to hospital size, being that hospitals with the greatest complexity are situated predominantly in the capitals.

Conclusions

Given the importance of the philanthropic hospital sector within the SUS in Brazil, this paper identifies some ways of formulating appropriate health policies adjusted to the specificities of its different segments.

INTRODUCTION

The philanthropic hospital sector in Brazil is responsible for approximately one third of the existing beds in the country,¹⁰ comprising an important public and private inpatient care provider within the Brazilian Health System. Special programs of the Ministry of Health, as well as of the governmental areas

responsible for collecting taxes and contributions, and economic institutions, such as the *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES) [Social and Economic Development Bank] are dedicated to this sector. In this sense, the network of philanthropic hospitals should be well characterized so that appropriate governmental policies, directed towards its development and further integra-

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tion into the Brazilian health system, both in the private and public sectors, may be formulated.

This article presents partial results of the “*Estudo sobre os Hospitais Filantrópicos no Brasil*” [Study on Philanthropic Hospitals in Brazil],¹ a national survey undertaken throughout the year 2001, by the *Escola Nacional de Saúde Pública da Fundação Oswaldo Cruz* [National School of Public Health of the Oswaldo Cruz Foundation].

According to present regulations^{2-6,12} those institutions certified as beneficent institutions of social assistance by the *Conselho Nacional de Assistência Social* (CNAS) [National Council of Social Assistance], a collegiate subordinated to the Ministry of Social Development and Fight Against Hunger, are considered philanthropic institutions. Several conditions are required in order to obtain this Certificate. The Decree 4.327/2002:³ establishes that for hospitals to fulfill these requirements there are two possible alternatives: they must offer and effectively provide 60% of their inpatient capacity to SUS; or, if the local SUS manager declares that it is impossible to contract 60% of the inpatient services, the institution must apply a percentage of its gross income in providing services free of charge, varying between 20% and 5%, depending on the effective percentage of SUS inpatient care provided. A third alternative for obtaining the Certificate according to the above-mentioned Decree is if the hospital is classified as being strategic to SUS. However, the criteria defined for fulfilling this classification and a list of hospitals included within it, as established by the Ministry of Health in 2002, was repealed in the beginning of 2003.²

The objective of this article is to characterize the philanthropic hospitals in terms of their geographic location, their size, available biomedical equipment, health care complexity and productive profile as well as the characteristics of their clientele.

METHODS

This cross-sectional study is based on data collected from interviews undertaken by trained interviewers who applied a questionnaire. Considering the universe of Brazilian philanthropic hospitals, three subsets of hospital institutions were constructed: (a) a random sample of 66 institutions that are SUS inpatient care providers, from which were excluded those institutions with at least 599 beds – *random sample*; (b) the universe of 27 SUS inpatient care provider institutions with at least 599 beds – *large institutions*; and (c) ten institutions intentionally selected due to the recognition they have acquired in the market for the quality of

care they deliver, among the universe of philanthropic institutions that are not SUS inpatient care providers – *special hospitals*. In the first segment, there were four refusals leading to replacements, and the 66 institutions included in the study correspond to 69 hospitals. Among the 27 *large institutions*, there was one refusal without replacement, resulting in the inclusion of 15 individual hospitals – institutions which maintained a single hospital – and 11 hospital conglomerates – institutions constituted by at least two hospitals, designated as component hospitals of conglomerates – involving a total of 81 hospitals. In the third subset of *special hospitals*, there were three refusals with replacements. A total of 175 hospitals were investigated.

Among the conglomerates’ component hospitals in particular, the instrument utilized to collect data was filled out by the hospital directors themselves. In this case, the trained researchers were only responsible for filling out the questionnaires of these large institutions’ headquarters.

In order to classify the counties in which these hospitals are located, data from the *Instituto Brasileiro de Geografia e Estatística* (IBGE) [Brazilian Institute of Geography and Statistics], concerning the number of inhabitants, as well as the delimitation of metropolitan regions⁹ was utilized. A logical flow of the classification of the hospitals’ profiles and complexity of care was constructed, which took into consideration the reported medical specialties and consistency with the number of physicians, of available beds, and of critical biomedical equipment in use in the Intensive Care Units (ICU), and data concerning the high complexity hospital procedures undertaken.

The SAS[®] System for Windows statistical package, version 8.2, was utilized.¹⁴

RESULTS

Geographic distribution

Figure 1 indicates the distribution of these hospitals throughout Brazil, according to the segments under consideration, and Figure 2 details this distribution according to the size of the counties and their location in or outside metropolitan areas and capitals.

It is noteworthy that most (81.2%) of the hospitals from the *random sample* are located outside the metropolitan region, and that, among these, the majority (53.6%) are the only hospitals within their counties.

Fifty per cent of the hospitals within the *large institutions* are located in counties outside metropolitan

areas. Considering only those hospitals that belong to conglomerates, 54% are located outside metropolitan areas. Furthermore, a great dispersion in their distribution may be observed, for 81 of the hospitals of the 11 conglomerates are located in 69 counties. Only two conglomerates concentrate their hospitals in the same county. Thirty-six hospitals pertaining to conglomerates (44%) and two of the 15 individual hospitals included in this study were located in counties with less than 200 thousand inhabitants.

All of the 10 *special hospitals* studied are situated in the Southern or Southeastern regions, and in counties with more than 200 thousand inhabitants; eight of these are located in state capitals.

Number of beds

Among the hospitals from the *random sample*, 75.3% have up to 100 beds, excluding special accommodations (ICUs and others). The average number of existing beds and of those being used is, respectively, 79.7 e 76.7. The average number of beds among all inpatient establishments in Brazil is 62.1; this rises to 65.7 when only the private establishments are taken into consideration.¹⁰

Among the *large institutions*, 11 of the 15 individual hospitals have at least 599 beds. This also occurs among eight of the 11 conglomerates, five of which have more than 900 beds. An important variation in size may be noted among the hospitals belonging to conglomerates, 39 of which (48%) presented less than 100 beds.

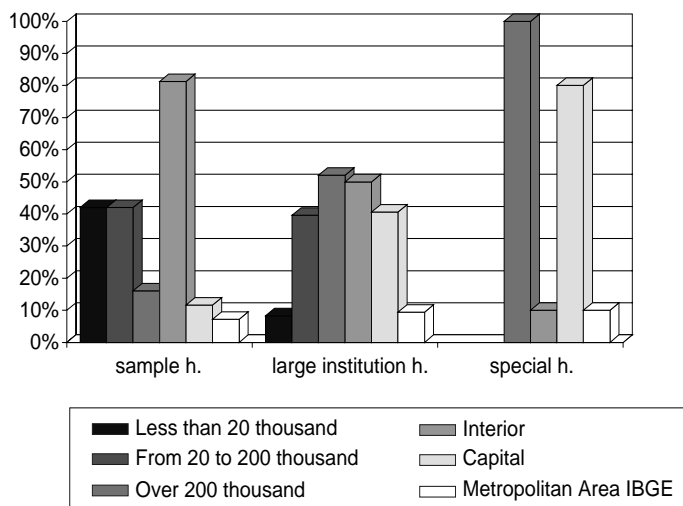


Figure 2 - Geographic distribution of the philanthropic hospitals according to size and location of the county. Brazil 2001.

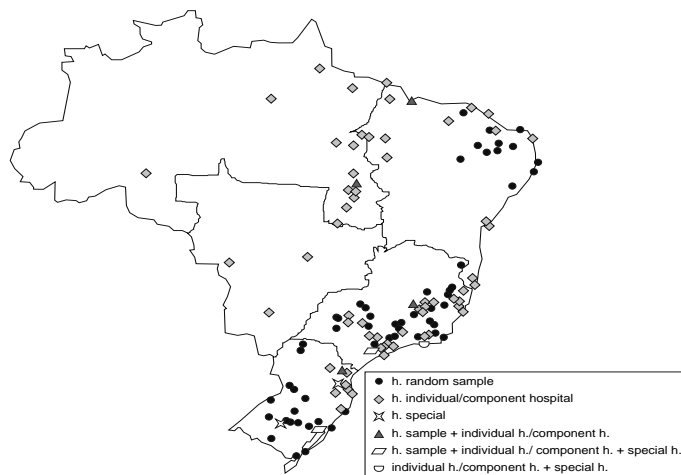


Figure 1 - Site of philanthropic hospitals according to county and segment. Brazil, 2001.

As a whole, the segment represented by the *large institutions*, is responsible for nearly 20 thousand beds, which corresponds to approximately 13% of the total number of beds within philanthropic hospital sector, according to the IBGE.¹⁰ On the other hand, it corresponds, approximately, to only 5% of the hospitals within the segment of *large institutions*.

As to the *special hospitals*, only one of them stated it had less than 50 beds, while the rest stated they had more than 100 beds. The average number of beds within this segment was calculated in 234.2, which is considerably larger than the average within the *random sample* (79.7) and the private establishments in Brazil (65.7).¹⁰

Biomedical equipment

Seventeen of the hospitals within the *random sample* do not even have portable X Rays (see Figure 3), which depicts their precariousness in terms of diagnosis. Considering equipment that express higher levels of complexity in care, only 12 hospitals had mammograms and 12 had CAT Scans (see Figure 3), one hospital had magnetic resonance and four hospitals had hemodynamic equipment, which is indispensable in cardiac care and more complex heart surgery. Half of the hospitals stated they had no equipment based on optical methods, generally related to better diagnostic and therapeutic conditions. The endoscope for the upper gastrointestinal tract was registered by 43.5% of these hospitals, and the video laparoscope, and important

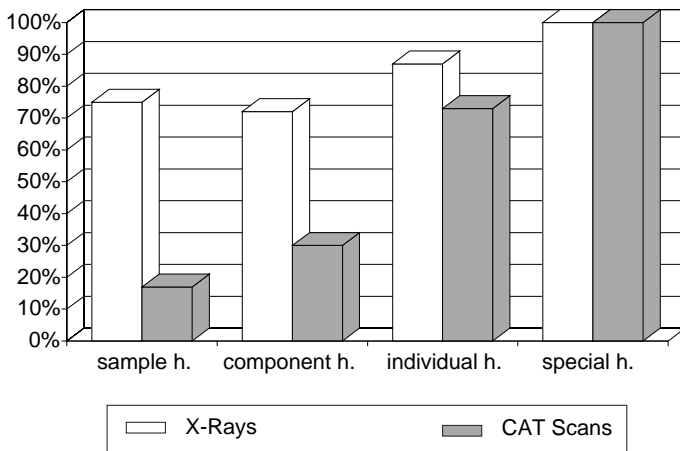


Figure 3 - Existence of X-Ray machines and CAT Scans in the philanthropic hospitals. Brazil 2001.

equipment for surgical procedures, was registered by only 24 hospitals (35%). The equipment referred to above are found, largely within hospitals in the state capitals. For example, all hospitals located in the capitals declared they had fixed X-Ray equipment, while only 33 of the 56 hospitals located outside metropolitan areas declared they had this equipment.

Differential patterns of incorporation of equipment may be observed when *large institutions*, particularly individual hospitals within these, are compared to hospitals within the *random sample*. The presence of at least one CAT Scan (see Figure 3), considered a differentiating variable in terms of the incorporation of equipment, is registered in 11 hospitals. As to equipment based on optical methods, 12 hospitals stated they had endoscopes for the upper gastrointestinal tract, and only eight stated they disposed of video laparoscopes. The conglomerates' hospitals once again manifest characteristics that are similar to those of the random sample's hospitals. Fixed or portable X-ray equipment were not available in 23 of the 81 hospitals included in this study segment. An expressive number of CAT Scans (24) and magnetic resonance equipment (11) was reported. The CAT Scans are equally divided among the hospitals in the capitals and outside the metropolitan region, and most (8 out of 11) of the magnetic resonance equipment is located in the capitals. The availability of endoscopes for the upper gastrointestinal tract and of video laparoscopes was reported by, respectively, by 37% and 36% of these hospitals.

The segment of *special hospitals* presents the greatest incorporation of equipment. It

should be noted that all ten hospitals had at least one CAT Scan, eight stated they had magnetic resonance equipment and nine had X-rays for hemodynamic monitoring. Furthermore, eight hospitals stated they had video laparoscopes and surgical microscopes.

Complexity of care

The level of complexity considered herein is the result of a classification developed within the scope of this study.

Figure 4 presents the distribution of the hospitals included in this study, according to their segment and the classification of care they deliver.

In the *random sample*, a predominance of basic clinic hospitals without ICUs (44.9%), in which the average number of beds was 39.7, may be observed. The majority (74%) did not have ICUs. Only five hospitals (7.2%) were classified as *level II general hospitals*, and none was registered as *specialized hospitals*. Furthermore, 50.7% of the hospitals within this segment did not report any special beds.

Focusing, simultaneously, on size and complexity of care among the hospitals in the *random sample*, it was verified that the smaller ones were also less complex. The highest average number of beds was found

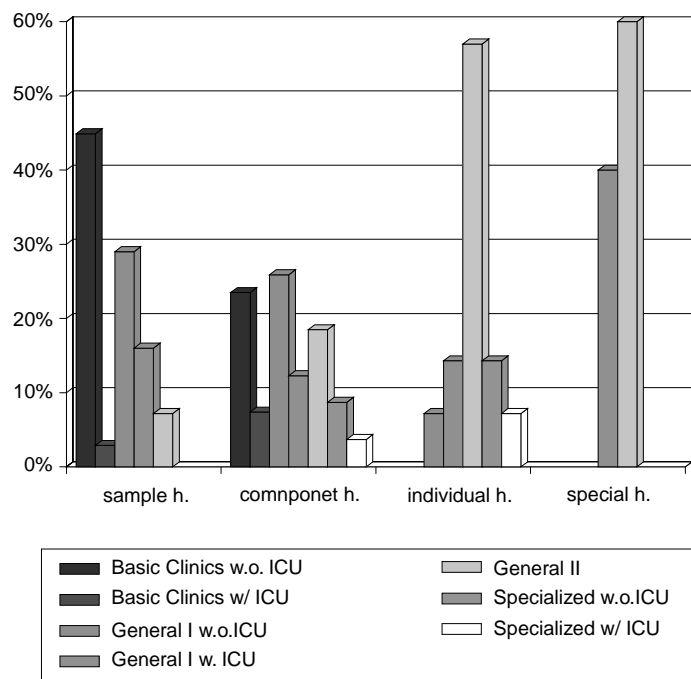


Figure 4 - Characterization of the complexity of health care in philanthropic hospitals. Brazil, 2001.

among the *level II general hospitals* – 183.6 beds.

Among the 51 hospitals within the *random sample* that do not have ICUs, 96% are situated in counties with up to 200 thousand inhabitants, and no *level II general hospitals* are found in the smaller counties (less than 20 thousand inhabitants).

As to the hospitals in the *large institutions* segment, a distinction must be made between individual hospitals and those that are components of conglomerates.

Individual hospitals, have the largest number of beds registered, and are among those with the greatest complexity. None of their units are *basic clinic hospitals*. Eight of the 15 hospitals were classified as *level II general hospitals*, being noteworthy that the two specialized hospitals that do not have ICUs are psychiatric hospitals. An extensive list of medical specialties also distinguishes these hospitals from others, being that eight of them included the head and neck surgical specialty, an important expression of surgical differentiation, among their specialties. Twelve of the 15 hospitals declared they had intensive care beds; however, only ten fulfill the conditions proposed by the care classification system for the maintenance of ICUs. Seven of the eight hospitals classified as *level II general hospitals* develop educational activities – residency programs, medical specialties, Masters and Ph.D. degrees and/or institutional clerkships for undergraduate students. Two hospitals offer all the types of courses listed above.

On the other hand, hospitals within conglomerates are more evenly distributed among the different levels of complexity, being that 47% have ICUs. Those that are less complex are located primarily outside the cosmopolitan areas. Among the 15 with the highest complexity, six are located outside metropolitan areas, six are located in capitals, and three in metropolitan areas.

Within the group of *special hospitals*, all except one have ICUs for adults and 60% are situated in the category of hospitals of the greatest complexity – *level II general hospitals*. Twenty-one services or medical specialties are registered within these hospitals.

Production and consumer profile

Practically all the hospitals within the *random sample* – 65 hospitals (94%) – are identified as SUS inpatient care providers, when registry of inpatients is taken into consideration; 58 hospitals (84%) register services for health care plans and health insurance companies; 54 hospitals (78%) register services to private patients; and only four hospitals (8,6%) reg-

ister services for their own health care plans.

Among the hospitals from the *random sample*, 75.2% of all inpatient services are directed towards SUS patients, 20% to health care plan and health insurance policy holders, 4.3% to private clients and only 0.5% to the hospital's own health insurance plans.

Only 16% and 17% of the hospitals in the *random sample* provide high complexity inpatient care and outpatient care for SUS, respectively. Only one hospital reported doing medulla transplants, but not for SUS. Six hospitals provide neurosurgical services and one of these does not offer these services to SUS patients. Two hospitals declared they offer kidney transplants and none undertake cardiac, lung or liver transplants.

It must be stressed that, upon considering the exams undertaken by hospitals in the *random sample*, SUS patients are very important clients, for 92.1% of the CAT Scans, for example, are solicited for them. The concentration of exams in the capitals is significant (70.6%), corroborating that despite the fact that this sector has a strong presence outside the metropolitan areas, the greatest complexity in the supply structure is located in large urban centers. Innovative activities in terms of care and of greater hospital organizational rationality are practically non-existent. Home care is reported by only one hospital, only for SUS, and only four hospitals stated they provide outpatient services for both SUS and non-SUS clients.

All the individual hospitals within the large institutions provide services to SUS, including, at least, inpatient care. Among the 15 hospitals studied, 12 reported they produce services for health plans and health insurance companies, 13 for private clients and 4 for their own health plans. Considering the total volume of inpatients admitted to hospitals within this segment, 70% are SUS patients, 16% are occupied by health plans and health insurance clients, 2% are private clients and 12% are clients covered by the hospital's own health plans.

Ten hospitals stated they undertake high complexity procedures in outpatient services and six stated that high complexity hospital procedures are provided for SUS. Among the former, the following procedures are available to patients: eight of the ten hospitals provide hemodialysis; seven, peritoneal dialysis; seven, chemotherapy; and five, radiotherapy. Among the latter, all six hospitals stated they undertook cardiac surgery, kidney transplants and neurosurgery, three hospitals stated they undertook medulla transplant and two stated they provided liver, heart and lung transplants.

Innovative activities in terms of care and of greater hospital organizational rationality are incipient, being that home care is provided by only three hospitals and outpatient services are provided by five hospitals; in both cases, these services are provided to SUS as well as non-SUS clients.

Furthermore, among the conglomerates' component hospitals, within the segment of *large institutions*, 74% provide inpatient services for SUS, 65% for health plan and health insurance holders, 69% for private patients and only one hospital for its own health plan. Six of the 11 conglomerates stated that all their hospitals provide inpatient services for SUS.

SUS patients represent 72.6% of the volume of inpatient services provided by the conglomerates' component hospitals, 19.7% are holders of health plans and insurance policies, 3.7% are private patients and 4% are clients of the hospitals' own health plans. The significance of the volume of services produced by the latter when compared to all other types of hospitals and clients is noteworthy for it refers to a single hospital. Only 15 hospitals (18.5%) declared they provide high complexity outpatient procedures and 11 (13.6%) provide high complexity hospital procedures for SUS inpatients. Among the latter, 13 provide neurosurgery, five cardiac surgery, three kidney transplants, two medulla transplants, one liver transplants and one cardiac transplants.

Innovative activities in terms of care and of greater hospital organizational rationality are practically non-existent, being that home care is provided by only two hospitals and outpatient care is provided by seven hospitals, for SUS as well as non-SUS clients in both cases.

Considering the total volume of inpatient services provided by the *special hospital* segment, it should be noted that only 0.5% is provided for SUS patients, 92% is provided for health plan and insurance policy holders – the clientele targeted by this segment – 3.6% for private clients and 3.9% for those who have the hospital's own health plans.

Although they are not registered as service providers for SUS, the special hospitals present themselves as providers of high complexity procedures for inpatients. SUS registry is not obligatory for this kind of service. The local SUS administrator establishes direct contracts with some private health service providers according to the demand for hospital resources. Considering only the services provided for SUS among these hospitals, six undertake cardiac surger-

ies, five neurosurgeries, three medulla transplants, two liver transplants, two kidney transplants and one cardiac transplant.

As to high complexity outpatient procedures, 72.1% of the hemodialysis and 48.5% of the peritoneal dialysis are provided for SUS patients. As to chemotherapy and radiotherapy, 100% of the production is provided to non-SUS clients.

As to the CAT scans and magnetic resonance, these exams are provided to SUS patients, but the latter represent a small portion of the production – 17.5% e 9.1%, respectively.

The group of special hospitals is the segment in which innovative activities are present to the greatest extent, although they are still limited. Home care is provided by two hospitals, outpatient care by five hospitals for non-SUS clients.

DISCUSSION

Considering the size of the network of philanthropic hospitals, its expressive capillarity and geographic extension throughout the national territory as well as the significant volume of SUS inpatient care it provides, it becomes clear that this sector deserves special attention when public health policies are being formulated.

The strategic role played by the philanthropic hospital sector as the only SUS inpatient care provider in a significant number of counties outside metropolitan areas, as well as a provider of higher complexity services in capitals and large cities, is also noteworthy.

SUS and the philanthropic hospital sector maintain an interdependent relation, considering all segments included in this study, except the special hospitals, as expected. According to data from Datasus, of the total number of SUS hospital registries in 2000, 37.6% are in philanthropic hospitals. *

The hospitals in the *random sample* and the *large institutions* segment were similar to one another in terms of the elevated number of SUS inpatients attended. On the other hand, the complexity of procedures provided to clients differentiates these two segments. The *special hospitals*, with their elevated technological capacity, are important service providers for health plans and insurance policies. The latter also provide high complexity procedures, particularly outpatient services, for SUS.

*Datusus. Sistema de Informações Hospitalares [SIH/SUS]. [System of Hospital Data] Available in URL: <http://www.tabnet.datasus.gov.br/cgi/tabcgi.exe?sih/cnv/rxuf.def>

It was found that hospitals with higher complexity of care profiles tend to have a greater number of beds. It may be suggested that technological concentration, in terms of equipment, installation and, naturally, specialized professionals, requires a larger number of beds, so that the economic investment involved has a higher probability of obtaining adequate financial returns.

Despite the importance and penetration of the philanthropic hospital network in Brazil, a significant portion of this network displays economic and administrative fragility that threatens its survival. In addition to these aspects, clearly demonstrated by the "Estudo sobre os Hospitais Filantrópicos no Brasil",¹ [Study on Philanthropic Hospitals in Brazil], other more general issues must be taken into consideration when defining the role to be played by this sector in the Brazilian Health System:¹¹

- (a) The decreasing rate of occupation of the hospitals, a tendency that may be explained by the lack of demand or technological inadequacy to attend to the demand;
- (b) The impact of the reorganization of primary care – involving models such as, for example, the Family Health Program, and the increasing technological complexity of outpatient care – that lends greater capacity of resolution to that level of care and creates other demands for more complex levels of care;
- (c) The need to guarantee access, whenever necessary, to services of greater complexity to populations of smaller counties, situated far from large urban centers;
- (d) The demand for other structures of nursing care and social assistance that make it possible to care for patients with chronic diseases and resulting social problems, particularly, within an ageing population.

These elements, of relevance to hospital care, may guide the formulation of policies that induce the configuration of a better integrated public hospital network, where roles are more clearly defined and better articulated to SUS at other levels of care – primary care, specialized outpatient care and home care – and which can respond more appropriately to fluctuations in the demographic profile as well as in the profile of population morbidity and mortality.

The philanthropic hospital sector needs to be considered in its diversity, demanding, of course, differential actions and policies.

The smaller hospitals, with lower complexity of

care, that are situated predominantly outside the metropolitan areas, are frequently the only hospitals in their counties and present the greatest risks in terms of survival. They need to incorporate new administrative tools and learn to use them efficiently. They also require measures of adjustment both on the part of the public agents and of their own directors.

The challenge they face is to migrate to projects that are more compatible with the proposals of extension and that provide greater resolution with respect to demands from primary care. Possible antagonistic paths point towards either the conversion of these units into nursing homes,^{8,11,13} or to their acquisition of appropriate equipment and human resources, so as to provide more specialized hospital services. Furthermore, the possibility of building collaborative networks with other hospitals, whether or not these are also philanthropic, so as to guarantee greater efficiency of care as well as in financial and administrative terms, should be contemplated.⁷ It should not be denied, however, that the philanthropic hospital sector plays a strategic role in guaranteeing vulnerable populations access to health care, as well as in recruiting and maintaining physicians in these more remote sites.^{8,13}

As to the individual hospitals and the components of conglomerates of higher complexity, particularly those situated in counties outside metropolitan areas, they might play the role of regional reference centers, requiring adjustments, principally in terms of their integration within the network of health services.

Finally, the potential role of special hospitals in providing SUS and supplementary health segments with highly specialized services should be considered.

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