UHS development and hospital services rationing

Desenvolvimento do SUS e racionamento de serviços hospitalares

José Mendes Ribeiro [1]

Abstract ***We analyze the Brazilian health care system from a comparative perspective. The migration of middle income clienteles to private prepaid companies brings the Brazilian case close to the American one. The production of hospital services in the UHS demonstrates an important reduction in supply aggravated by population growth and by expectations defined by constitutional provisions. The reduction is selective, being concentrated in obstetric and medical clinic services and for-profit private services. In order to ensure equitable access it is necessary to: amplify public expenditure; reduce expenditure from out-of-pocket payments; organizational reforms; amplification of government capacity.***

Key words ***Unified Health System, Hospital care***

Resumo ***Analisamos o sistema de saúde brasileiro em perspectiva comparada. A migração de clientelas de renda média para operadoras pré-pagas privadas aproxima o caso brasileiro do norte-americano. A produção de serviços hospitalares no SUS demonstra importante redução da oferta agravada pelo crescimento demográfico e por expectativas definidas por disposições constitucionais. A redução é seletiva e concentrada em serviços obstétricos e de clínica médica e nos serviços privados lucrativos. Para se garantir acesso equitativo é necessário: ampliação de gastos públicos, redução dos gastos por desembolso direto, reformas organizacionais, ampliação da capacidade de governo.***

Palavras-chave ***Sistema Único de Saúde, Atenção hospitalar***

[1] Departamento de Ciências Sociais, Escola Nacional de Saúde Pública Sérgio Arouca, Fundação Oswaldo Cruz. Rua Leopoldo Bulhões 1480/920, Manguinhos. 21045-210 Rio de Janeiro RJ. ribeiro@ensp.fiocruz.br

Introduction

The public health care system and its beneficiaries are defined in the terms of the Unified Health System (UHS). This system was created based on the constitutional provisions of 1988 and implemented by laws declared in 1991. It is the main purchaser of health care services in the country. Its institutions decisively affect the distribution of services by state and private organizations (for-profit or non for-profit). The UHS is a mixed system, with services hired by private insurance companies for their beneficiaries and others with out-of-pocket payments. Although this is the composition seen in most OECD (Organization for Economic Co-operation and Development) countries, the Brazilian case stands out because it has constitutional provisions that define a model similar to the Western European one. In practice, the composition seen is closer to the American situation. In order to analyze this type of public policy evolution, it is necessary to discuss the reform experiences in the health care sector of developed countries in the last few decades and the Brazilian case from a comparative perspective. The evolution of hospital services supply in Brazil after the UHS was formed should be seen in light of the financing schemes practiced here.

The literature refers to three great sector financing molds, although analyzes on mixed schemes predominate nowadays. Two are directed at obtaining high universalization standards. One of them highlights the centrality of financing through general tax, known as Beveridgean, and the other is based on compulsory social security, with corporate traditions, known as Bismarckean. The other mold emphasizes private financing resulting from the market position of beneficiaries or purchasers, in the form of voluntary insurance. If we take as systemic objectives guaranteeing access and equity, Ham[1] states that these different models present common problems in the supply of services that are almost independent from existing methods and financing levels. Although the magnitude and specificity of the problems observed in each country are relevant, there is a common political agenda when it comes to supply and access to services. In the same direction, Starfield[2] points to a process of convergence in international experiences when it comes to financing, payment, contracting and management mechanisms of health care services. The systemic convergence and the existence of common agendas should not obscure the fact highlighted by Ham[1] that financing by general taxes or compulsory social security represent the base schemes for ensuring equitable access.

Health care services are highly dynamic and respond to social and political system demands (democratic function) and to complex processes (technological innovations; growing costs). The 1980s, the period of Brazilian reform, was the stage for innovations in the main OECD economies. A common agenda dealt with reducing hierarchical integration and progressive contractualization, exposure to markets, separation between financing and provision, results orientation, focus on macro and micro-efficiency and diverse organizational innovations. Systemic approaches and case studies proliferated in this direction[3-7]. National systems' dynamism and capacity to adapt to political, social and economic changes led to the predominance of mixed financing and service contracting schemes and professional payment mechanisms. This is reflected in the composition of expenditure presented in the World Health Organization's (WHO) national account systems.

The recent changes led Ham[1] to describe four types of reform: big bang; incremental; localist; and "reform without reform". We can consider, for our purposes, that the localist models (reforms by local protagonism in highly decentralized systems) and "non-reform" (Clinton reform, defeated in the legislative branch and implemented partially and in slices) as specific examples of incrementalism. Incrementalism is expressed in parsimonious changes over a long period and that are subject to the political system, institutional problems and an emphasis on consensus. The big bang model, as analyzed by Klein[8] in the context of the British system's reform during the Thatcher government, for its part, would involve short periods of time and governments committed to profound and accelerated changes.

The Brazilian sanitary reform of the 1980s peaked with the 1988 Constitution, in the context of a first redemocratizing government, with key posts in public administration occupied by leading sanitarists. Profound institutional changes, such as the universalization of access to health care services through a public system financed by general taxes in Beveridgean molds, have been well explained in the national literature[9-11]. The paradox is that, in this profile favorable to a big bang reform, in practice, reform took place through incremental mechanisms and with some effects contradictory to its institutional objectives. This was very well characterized by Faveret & Oliveira[12] as "excluding universalization". Careful observation of the Brazilian case's development after the UHS was created shows that contingents better placed in the market migrated to private insurance, wheth-

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er by individual contraction or the employer/employee system.

In this article we deal with the evolution of the UHS, having as premises (i) the clientele migration process defined as excluding universalization[12]; (ii) the predominance of mixed financing, services contracting and professionals payment schemes, associated to the notion of convergence of national systems[2]; (iii) and the opposition between big bang and incremental reform processes[1].

The universalization of access by the UHS is based on extending citizens' entitlement to health care services through tax financing. The objective of social inclusion should be consolidated by universal coverage and equitable access. Universalization gains an excluding connotation by the joint effect of two main mechanisms: (i) the exit of high and middle income brackets to private insurance; and (ii) the rationing of services supply in the public system. Access guarantee is a key element for realizing the constitutionally-defined entitlement. We use the distribution of hospital services from 1984 due to their clear relevance in mature national systems.

Characterization of the health care system in Brazil

The country's redemocratization after the civilian government came to power (1985) favored reforms such as in social security and the health care sector. Since 1982, through Integrated Health Actions (AIS) and similar agreements (SUDS), mechanisms were sought to lessen the segmentation of access to health care services that received public funding. These agreements overrode, at least until 1990, the supply structures that had long existed and that characterized the segmented model. Describing all the existing conditional or universal access schemes requires detailed research and reveals dozens of financing and access mechanisms, which began in many regions of the country to coexist with the AIS/SUDS open access and transition to the UHS systems.

The main financing, entitlement and access schemes included: social security regime (social security, tripartite financing and conditional access); Ministry of Health (conditional and free access, according to region and pathology; financing by the federal government); military corporations (conditional access; financing by the federal government and the military). University public hospitals (federal or state financing; free access progressively redirected to social security clienteles); health secretariats (financing by state or municipal governments; non-conditional access); private providers (financed by direct payments, health insurance or the social security system; conditional access); unions and corporate autarchies (financing by affiliation to unions or belonging to professional categories; conditional access); private insurance (individual or employer/employee financing; conditional access).

The system before the UHS was robust, albeit highly unequal. The privilege of access was given to those who social security ties and corporate insertion. The inequality situation was accentuated by the inadequate coverage of rural areas. We do not know of any studies that detail the expenditure of each of the above items that can be used for comparative purposes. The political perception of a system that was at the same time inefficient and unjust was at the base of the political initiatives that converged in 1988 to bring about the constitutional consolidation of the so-called sanitary reform.

The current situation of the health care system in Brazil can be seen by comparing it to different developed and emerging countries. According to data from the World Health Organization (WHO)[13] for the year 2005 (Table 1), Brazil spends a total of 7.98% of GDP on health care, out of which government expenditure for the three branches of government equal 44.1% and private expenditure 55.9%. This is quite close to the distribution seen in the United States of America. However, when the composition of private expenditure is studied, in Brazil private health insurance equals only 30.2% of this total, while in the US it corresponds to 66.3% of private costs. This difference is a result of the high participation of out-of-pocket payments in the costs (54.6%) in Brazil when compared to the US (23.9%). This suggests that Brazilian families have low protection against financial risks.

According to OECD[14] data for the year 2005, the average for developed countries in these indexes is health expenditure equivalent to 9.0% of GDP; government expenditure at 74% of total expenditure and 26% of private expenditure; and within private expenses, expenses from out-of-pocket payments is 20%. Looking at data from the national accounts of developed and emerging countries, whether in OECD or WHO data, the Brazilian case is characterized by low government participation (although this is high when compared to Asian economies with fragile social protection systems, such as China and India) and high exposure of families to financial risk. In Table 1, we present data for a set of countries with developed or emerging economies, from different continents, and the

cases with the lowest government participation involve Argentina, Brazil, China, India, Mexico, South Africa and the United States. Out of these, only the US carry out some form of protection through

Table 1. Health care sector financing, selected countries, national account systems, 2005.

	Total health care expenditure, % of GDP	General government health care expenditure, % of total health care expenditure	Private health care expenditure, % of total health care expenditure
Argentina	10.2	43.9	56.1
Australia	8.8	67	33
Brazil	7.9	44.1	55.9
Canada	9.8	70.2	29.8
Chile	5.4	51.4	48.6
China	4.7	38.8	61.2
Colombia	7.3	84.8	15.2
France	11.2	79.9	20.1
Germany	10.7	76.9	23.1
India	5	19	81
Japan	8.2	82.7	17.3
Mexico	6.4	45.5	54.5
Holland	9.2	64.9	35.1
Russia	5.2	62	38
South Africa	8.7	41.7	58.3
Spain	8.2	71.4	28.6
Sweden	9.2	81.7	18.3
United Kingdom	8.2	87.1	12.9
USA	15.2	45.1	54.9

	Social security expenditure, health care, % of general government health care expenditure	Expenditure with out-of-pocket payments as % of private health care expenditure	Private prepaid insurance as % of private health care expenditure	Total health care expenditure per capita (PPP)*
Argentina	57.8	43.4	51.8	1529
Australia	0	55.2	22.5	3001
Brazil	0	54.6	30.2	755
Canada	2	48.7	42.6	3452
Chile	67.7	54.3	45.7	668
China	54.1	85.3	5.8	315
Colombia	69.5	45.1	54.9	581
France	93.8	33.2	63	3406
Germany	87.6	56.8	39.8	3250
India	4.7	94	0.8	100
Japan	78.9	82.4	14.3	2474
Mexico	62	93.9	6.1	725
Holland	94.1	21.9	55.5	3187
Russia	42	82.4	8.2	561
South Africa	4.1	17.4	77.3	811
Spain	6.6	73.1	22.6	2242
Sweden	0	88.5	1.6	3012
United Kingdom	0	92.1	7.9	2598
USA	28.8	23.9	66.3	6347

*Purchase Parity Power.

Source: WHO, 2008[13].

more robust pre-payment, as inefficient as their sanitary system may be, as is well shown by Porter & Teisberg[15]. In any case, Brazil's model is very far from what is desired for systems based on general taxes.

Data from the National Supplementary Health Agency[16] for the year 2006 reveals a total of 49,281,416 beneficiaries of private prepaid health plans in Brazil. From this total, collective plans, characterized essentially by employer/employee contribution mechanisms, form the greater part of these beneficiaries (36.891.018). This equals a national coverage of 19.92% and this distribution is quite unequal, varying from 31.54% for the southeast region to 6.62% to the north region.

Health care services supply and the use of data from administrative bases

Public and private administrative bases represent inestimable sources for research in spite of reliability problems. Consulting available bases is a necessary part of monitoring and assessing policy and services results, although complete investigation requires direct data collection based on the previously established results indexes[17].

In Brazil, the main public base is the DATASUS/MS one. IBGE research (AMS; PNAD) represents the main source of information collected directly. From the DATASUS bases, we highlight the information about hospital services available from 1981 and that has been organized as the UHS Hospital Information System (SIH-SUS) since 1991. The basic purpose of this system is to detail quantities and values paid per procedure according to a single table inspired (in a simplified form) by the DRG in the American Medicare system. The consistency of the data available in these bases varies enormously according to the legal nature of the informants, the town and/or region, and the type and complexity of the procedures performed. However, changes in public system governance and new information tools allow assessment studies to be carried out. The reliability of Inpatient Hospital Authorization (AIH) data has been verified. Martins & Travassos[18] tested this information for private hospitals for acute illnesses and found high reliability for administrative, demographic, death and transference variables, but low reliability for the type of admission, surgical team composition, SADT and main diagnosis. Mathias & Soboll[19] found reliability in the AIH diagnosis and medical records for normal birth and arterial hypertension and a lack of coherence in items for codification errors of the simplified CID-9 version used by social security. Escosteguy ***et al.***[20] assessed the quality of information for Acute Miocardial Heart Attack, concluding that there was greater consistency in AIH records, according to samples of medical records, when related to death cases and for public hospitals. Schramm & Szwarcwald[21] used the SIH to estimate natimortality and perinatal mortality compared to those obtained in the Mortality Information System and demographic estimates and concluded that the SIH was valid for correction factors. Ferreira ***et al.***[22] studied AIH for AIDS cases in UHS hospitals with data from the Notification Appeals Information System (SINAN) and found a sub-notification, which was lowest for the hospitals that had a specific sector for epidemiological vigilance. Ribeiro & Costa[23] saw a significant positive correlation between real average costs and the values paid by the AIH as predictive of casemix, reiterating a PLANISA[24] with average discrepancy in these values (R$ 631.60 of average AIH for 22 hospitals with costs estimated by PLANISA parameters of R$ 1,590.53). Lima ***et al***.[25] compared the information on municipal health expenditure in the SIOPS with those in the National Health Fund and, although the consistency varies according to the study year, for the last series studied (2002) the SIOPS data proved to be reliable.

We will use these sources to analyze the development of hospital care in the UHS, considering large numbers and more extensive series to minimize errors.

Characterization of supply: profile of UHS supplier hospitals

The excluding universality thesis sustains that there was a migration of clienteles favorably placed in the labor market, from the recently universalized system based on tax financing (UHS) to private insurance. Tax financing tends to favor equity and we can consider this migration of clienteles, which intensified in the late 1980s, to be unfavorable to the new objectives. If we consider (i) that the concentration of tax resources in the government sphere makes its allocation sensitive to the combination of political decision and central planning and (ii) that supply rationing represents the main strategy for controlling costs in this type of financing. We use hospital supply to observe a possible rationing and its effects on clientele migration to private insurance. This transference of clienteles supposedly affected the universalist objectives of Brazilian reform.

The participation of UHS supplier hospitals in

relation to the total hospitals in the country is very expressive. According to data from the IBGE's Medical-Sanitary Assistance Research (AMS) from 1999[26], out of the 7,806 Brazilian hospitals, 6,148 (or 78.8%) supplied services for the UHS. The total hospital beds available in the UHS, however, decreased according to 2002 AMS data[27]. More recent data collected by the IBGE[28] shows that the total number of establishments with hospitalization was 7,397 in 2002 and 7,155 in 2005. There was a concomitant increase in the number of establishments without hospitalization or exclusively intended for diagnosis and therapy (apart from the lack of office accounting). This suggests changes in the technological basis of the health care sector. For the same period, the IBGE points to a slight change in the number of public (state) beds, a slight reduction in the total private beds not linked to the UHS and an expressive fall in the total UHS private beds.

As we can see from paid AIH data, there was also a significant global reduction for the UHS, with an increase in state hospital production on an insufficient scale to compensate the great decrease of AIH paid to private suppliers. Therefore, both information sources converged significantly on this aspect. What we cannot infer, however, from this data, is the possible migration of private beds to private insurance companies, where there was a slight reduction in the number of beds. We can consider migration to have been accompanied by more efficient use of private beds not dependent on the UHS by the very nature of the business. In any case, the thesis presented here remains: there was an expressive reduction in production in the UHS hospitals concomitant to private insurance expansion.

Data from the National Health Establishments Register (CNES) for 2008 shows the current distribution of hospitals according to the type of financing and the legal nature of the provider (Table 2). Considering that many hospitals provide services to different hirers, the UHS is still the main isolated mechanism for funding hospital services in a country with a total of 6,101 registered hospitals. However, even considering that the totals are not mutually exclusive, if we add, by universalization model, the other modalities (private hospitals associated to their own public and private plan units, which combine access to health plans, by out-of-pocket payments and to the UHS), they offer a total of 5,764 hospitals.

In Table 3 we show the evolution of the total AIH paid by the public system from 1984 to 2007, passing through the formal creation of the UHS in 1990 and the start of establishing resource transference rules through the Basic Operational Rule of 1991 and subsequent ones. To assemble the table based on data available at DATASUS, we have made some combinations for greater clarity. The main ones were joining the AIH paid to federal and state hospitals to the respective payments with own

Table 2. Total health units with hospitalization by financing type and legal nature. Brazil, 2008.

	SUS	Private	Public health care plan	Private health care plan
Direct health care administration	2668	33	4	14
Direct administration, others	43	11	16	6
Autarchies	68	8		4
Public foundation	78	4		4
Public company	14	4	2	2
Public social organization	13	1		
Private company	1384	2523	109	768
Private foundation	100	80	6	27
Cooperative	3	49	2	27
Autonomous social service	4	1		1
Non-profit entities	1721	1443	127	485
Mixed economy	2	1		
Union	3	1		1
Total	6101	4159	266	1339

Source: CNES.

funds, joining the different tax deduction regime forms for philanthropic hospitals and contracted companies within these legal forms and the diverse forms of presenting hospitals with teaching and research activities in a single group of university hospitals. It was not possible to separate the public and private regimes in the university group. To interpret this data it is important to first highlight aspects of payment mechanisms over the course of these fourteen years.

University hospitals were gradually reclassified as proprietary entities and, therefore, they became residual from 2004. Own (state) hospitals that were important in the period 1990 to 1995 were redistributed by the system according to their government sphere. We must therefore pay more attention to the evolution of the AIH paid to state and private hospitals. We deal with a great number of AIH and we draw attention to the most relevant differences. This way we can, at least partly, compensate known information biases for this type of database. Although we cannot generalize, we know that the incentive for state hospitals that receive a global budget, and which have a large part of their employees being paid by other public administration bodies, to inform AIH is lower and leads to sub-notification. On the other hand, the incentive for private hospitals to inform for the purposes of more efficient billing is greater. In part, these biases could be corrected by observing the average permanence in the paid AIH and by the occupation rate attribution. That way we would be able to estimate the sub-notification level. However, aside from valuing very important differences here, tests performed to adjust this data are not helpful for the order of magnitude used here.

In Table 3 we can see a high reduction in the total volume of AIH paid by the public system from the year 1992 (beginnings of the UHS) until 2007, falling from a total of 15,485,522 to 11,724,493. The reduction of the federal hospital AIH from 1997 was expected due to the transference of units to state and municipal governments. In terms of offer rationing, the group that clearly distanced

Table 3. Total AIH paid by legal nature, UHS, Brazil, 1984-2007.

Year	Own	Contracted	Federal	State	Municipal	Not for-profit	Trade Unions	University	Unknown	Total
2007	2,244	1,952,174	457,852	2,268,937	2,365,043	4,658,775	1,489	30	17,949	11,724,493
2006	3,670	2,032,019	431,799	2,212,092	2,343,889	4,681,134	1,395	843	14,571	11,721,412
2005	0	2,214,002	435,274	2,211,018	2,339,227	4,657,294	4,679	0	0	11,861,494
2004	0	2,387,280	421,244	2,123,697	2,309,393	4,708,429	3,813	0	0	11,953,856
2003	517	2,679,989	179,027	1,886,894	2,126,312	4,408,660	4,590	808,886	0	12,094,875
2002	841	2,911,447	27,411	1,742,342	2,001,753	4,148,268	4,663	1,396,977	0	12,233,702
2001	492	3,120,527	41,355	1,614,416	1,857,331	4,123,665	7,034	1,462,416	0	12,227,236
2000	0	3,295,044	76,018	1,349,273	1,815,946	4,228,817	6,538	1,654,501	0	12,426,137
1999	0	3,419,152	94,988	1,324,239	1,764,226	4,200,230	6,366	1,629,175	0	12,438,376
1998	0	3,610,206	120,141	1,278,902	1,512,118	4,152,483	5,937	1,568,845	0	12,248,632
1997	1,386	4,022,487	148,299	1,254,334	1,313,978	4,105,826	4,267	1,500,887	0	12,351,464
1996	2,457	4,851,116	1,310,037	0	1,174,903	3,693,942	3,890	1,494,537	0	12,530,882
1995	12,914	5,369,764	1,295,874	0	1,166,737	3,941,104	3,716	1,484,955	0	13,275,064
1994	35,158	6,306,052	122,159	1,389,231	1,198,379	4,843,993	2,573	1,469,781	0	15,367,326
1993	75,374	6,574,307	179,856	1,562,568	1,084,672	5,084,144	705	1,055,454	0	15,617,080
1992	111,771	6,817,258	231,866	1,421,430	919,849	5,084,145	1,261	897,942	0	15,485,522
1991	142,406	6,822,857	145,595	1,073,167	602,936	4,804,430	0	820,419	0	14,411,810
1990	17,609	6,785,351	24,608	120,480	47,121	4,813,435	0	754,226	0	12,562,830
1989	0	7,959,314	0	2,090	0	3,553,864	0	678,365	0	12,193,633
1988	0	11,209,699	0	0	0	0	0	717,662	0	11,927,361
1987	0	10,103,883	0	0	0	0	0	171,923	0	10,275,806
1986	0	8,894,626	0	0	0	0	0	0	0	8,894,626
1985	0	8,482,190	0	0	0	0	0	0	0	8,482,190
1984	0	9,745,833	0	0	0	0	0	0	0	9,745,833

Source: DATASUS.

itself from the system was for-profit private hospitals (known as contracted hospitals). The data for this group is more relevant from 1989, when the separation with philanthropic entities happens for the first time. From then onwards, the reduction takes on great proportions and continues from year to year, from a total of 7.959.314 AIH paid (1989) to 1.952.174 (2007). Some units may have converted to the philanthropic regime, but this certainly does not affect the conclusions about this segment's UHS exit, especially if we look at the much smaller variation in the growth of philanthropic entities. One explanation is that this sector, having no tax benefits and depending on the sale of services, started selling services to private insurance companies as a result of the UHS pay table not covering real costs[23,24]. A relevant fact was the expansion of state and town units since 1991, even without compensating the exit of for-profit hospitals.

University hospitals were redistributed according to their respective legal natures from 2004 and we have no evidence on the type of distribution made. The main observation is that state and municipal governments took on the burden of compensating the general supply rationing which was caused mainly by the exit of for-profit hospitals. This movement was concomitant with the accelerated amplification of prepaid private plans. When this data is combined with AIH paid to state and private hospitals (excluding university and unknown ones) the evolution for the set of private hospitals gradually decreases from 11,627,287 in 1991 to 6,612,438 in 2007. For state hospitals the evolution is 1,964,104 (1991) to 5,094,076 (2007).

In Table 4, we analyze the reduction in the quantitative of AIH paid by the UHS and its financial aspects. Here it can be seen that in real terms (base year 1995) there was a reduction of 24.81% of the public system expenditure with the hospitalizations informed by the SIH-UHS. In relation to the AIH volume paid by the system, there was a reduction of 11.68%. As the exit was concentrated in the private for-profit sector, the values of the UHS pay table (expressed by the procedure average), out of step with real costs, can explain the reduction in services production and their possible redirection to more profitable high-complexity procedures.

The period analyzed from 1995 is known for primary care clinics taking up a larger percentage share of federal health care costs, with the creation of the Primare Care Budget and the diffusion of the Family Health Program. With this, the federal government's transfer to states and towns for non-hospital activities became balanced with hospital activities. It is difficult to specify the percentage shares in the period for the UHS, for this depends on SIOPS data and its consistency is greater for more recent periods. Besides, according to Ministry of Health data for 2006, the federal transfers were distributed (current values) into R$ 12,878,797,579.90 (medium and high complexity), R$ 6,787,272,181.92 (basic care) and R$ 2,233,448,915.82 (strategic actions). Therefore, there are no solid indications of the hospital financing model changing significantly to the preventive one.

It can be argued that a possible emphasis on preventive activities could explain the rationing described here and, therefore, be advantageous.

Table 4. Total value of AIH paid, 1995-2007, real values (base=1995), UHS, Brazil.

Year	Real values (R$)	Total AIH paid	Lenght of stay	Mortality rate
1995	3,192,437,637.99	13,275,064	6.6	2.17
1996	2,760,523,853.69	12,530,882	6.6	2.19
1997	2,548,953,930.81	12,351,464	6.4	2.34
1998	2,837,431,273.57	12,248,632	6.4	2.18
1999	3,457,540,975.66	12,438,376	6.3	2.63
2000	2,978,686,863.65	12,426,137	6.1	2.67
2001	2,843,760,334.45	12,227,236	6.2	2.75
2002	2,741,081,711.66	12,233,702	6.2	2.86
2003	2,305,351,185.42	12,094,875	6.1	2.98
2004	2,436,573,863.99	11,953,856	6.0	3.16
2005	2,307,656,903.94	11,861,494	5.9	3.21
2006	2,284,394,868.42	11,721,412	5.8	3.30
2007	2,400,502,982.34	11,724,493	5.8	3.44

Source: DATASUS.

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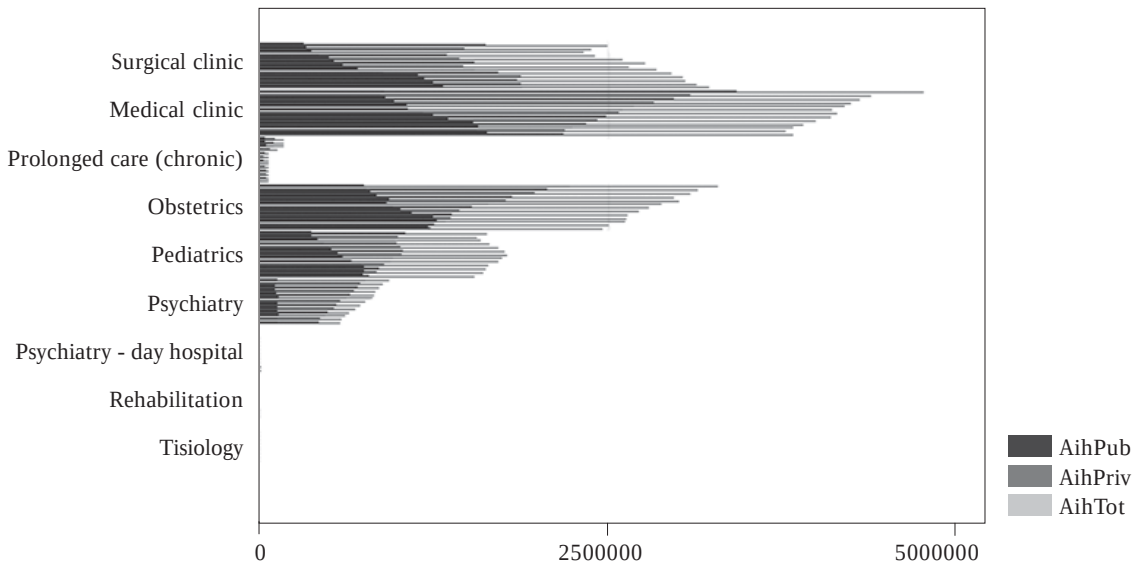
Apart from the lack of evidence of this change and its magnitude, it has yet to be adequately demonstrated that hospital demand goes down as a result of better ambulance and preventive services. This is a complex theme which must be considered in the debate. However, it is believed that robust primary care systems have beneficial effects on the quality of the health care system as a whole and on the health of individuals. In these favorable conditions, there would be a movement from hospital demand to more complex conditions (that can be measured by greater average AIH values) and to higher age brackets (that can be measured by greater permanence averages and, possibly, higher mortality rates). Considering the Brazilian case, this is not a simple answer and we can discuss the case on preliminary bases only. Firstly, voters' social perception in opinion polls always point to health as one of the main social problems. News programs stress, for a large part of Brazilian metropolitan regions, problems of restricted access to hospital beds and emergency care in the UHS. A more localized look would reveal towns and regions where the public system works with a quality higher than the national average. In Table 4 we can see that the average values of paid AIH (in deflated values) decreased from R$ 240.48 (1995) to R$ 204.74 (2007). The permanence average varied from 6.6 days (1995) to 5.8 days (2007). This decrease can be attributed to the slight improvement in the system's efficiency. With combined numbers for all UHS supplier hospitals in the country, with the majority consisting of hospitals for acute illnesses and/or low or average complexity surgeries, these are still high numbers and are unlikely to be linked to a change in demand profile as a result of more effective "basic care". In relation to the general hospital mortality rate in the UHS, the variation was from 2.17 (1995) to 3.44 (2007). This increase does not reflect a setting of relevant changes in the hospital demand profile as a result of a widespread increase in expenditure with different types of clinic. We can concede, at least preliminarily, that the public system as a whole does not retain middle population segments and that hospital rationing is consistent with the search for better access according to individuals' purchasing power.

The most restrictive aspect of access to public hospital beds can be seen in Graph 1. We observe not only the reduction of AIH paid in the period 1995-2007, but its distribution in the main clinics. In the analyzed series, only the surgical clinic presented growth for state and private providers. For prolonged care, there was a decrease in totals and in



Graph 1. UHS hospitals, total AIH, regime and specializations, 1995-2007.

Source: Datasus.

type of provider, but the variation was lower. In the case of reduction in AIH numbers for psychiatry, this can be seen as beneficial and a result of de-hospitalization policies for these types of patients. In the case of AIH for pediatrics, the pattern seen follows the general setting where the decrease in the totals is accompanies by a fall in the number of AIH for private providers and a concomitant increase in the totals for state providers without, however, compensating the exist of private providers. In this case, as we are dealing with care for children, we can consider it reasonable that better vaccine coverage, a clear success of Brazilian public health care, accompanied by the expansion of primary care programs may explain the variation. On the other hand, what stands out most in Graph 1 is the significant reduction of AIH paid for medical clinic and obstetrics care and the concomitant movement of great retraction in private providers, without adequate compensation for the growth of governmental provider AIH. The possible sub-notification for governmental hospitals does not seem to be enough to explain the magnitude of the differences for various reasons. At first, as we saw in the previous topic, the recent literature with administrative bases consistency tests showed that, on the whole, there was reasonable reliability for comparative purposes. Besides, as we are dealing with historical series, it does not seem reasonable that sub-notification of public providers would have varied significantly from year to year for the national set. The expansion of public (state) providers in the series basically occurred from municipal and state hospitals, in detriment to the federal and university ones. In these cases the incentive for better notification results from health secretariat pressure for federal transferences for hospital services produced.

Data from IBGE/AMS[26,27] collected directly from hospital services confirm the thesis of general bed reduction in the UHS during this period. With these considerations, we admit there was an important retraction in UHS hospital services and this strongly affected highly relevant sectors, such as obstetrics and medical clinic. This is reflected in hospital lines, overstretched emergency services and an aggravation of clinical conditions. In the case of obstetrics, the lack of bed guarantee in diverse regions of the country may aggravate the maternal mortality rates, encourage surgical births and weaken pre-natal policies. On the whole, this process encourages users to move away from the public system.

Final considerations

We analyze the Brazilian health system and highlight that its configuration differs from the model usually seen in countries with general tax financing and/or with access universalization through mandatory social insurance. In spite of the constitutional provisions of 1988 and the advocated public financing model, including decentralization of federal resources for states and towns, the configuration seen is close to the American one, both having a strong presence of private insurance financing. In the Brazilian case, there is the aggravating factor of exposure of individuals to catastrophic risks as out-of-pocket payments are proportionally higher than in America.

This setting had already been well classified from the moment the UHS was created, by Faveret & Oliveira[12], as an "excluding universalization". This process was not reversed by the UHS and, on the contrary, new contingents seem to be progressively incorporated to prepaid companies through the labor market. The permanence of this model compromises the equitable access that is institutionally advocated. Also, it has questionable effects due to growing medical costs and their impact on the budgets of companies and families. It is possible that a setting will form where tax financing of the public system will have to take on an unprecedented major rule in order to revert this critical situation.

In Brazil, the big-bang reform that was advocated according to established typology[1,8] gave way to incrementalism, including high experimentalism based on local innovations with varying degrees of sustainability.

The data presented on the production of hospital services in the UHS confirms the thesis of UHS supply reduction. This suggests that the for-profit private sector, where this supply reduction really occurred, migrated to private prepaid companies as a result of the pay table for services provided. The migration and its impact on private hospital services, however, require greater study.

Finally, and not dealt with here, there is the problem of the low efficiency of public hospital services in Brazil. A restricted supply accompanied by inadequate use of available resources amplifies the negative effects of rationing and aggravates the restrictions experienced by those who depend on the public system. Recent studies have shows the comparative inefficiency of state hospitals[29-34]. Some successful innovations in public management are highlighted and advocate adopting contractualization models and goal regimes for public hospitals. These are known ways of expanding real supply

through better use of installed capacity and of obtaining better quality in the services provided. In general there is an evident need for an institutional environment favorable to innovations as well as good government capacity to sustain policies oriented to efficiency gains.

It seems clear that the general objectives of public policy must guide actions on all government levels in a more homogenous manner, which perhaps isn't easy due to the decentralization model imposed on towns regardless of their population sizes and government capacity. However, if access universalization is, according to the constitutional definitions, the political objective to be followed, a sector-based political agenda must be established. Concomitant objectives must be pursued in the name of promoting greater equity and these include: (i) increasing public sector expenditure; (ii) reducing exposure of individuals to out-of-pocket costs; (iii) organizational reforms directed at results; and (iv) increasing the government capacity of entities that hire public system services and that regulate private insurance companies.

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