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The Lombardy Health Care System

Elenka Brenna

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Istituto di Economia dell'Impresa e del Lavoro
Facoltà di Economia
Università Cattolica del Sacro Cuore
Largo Gemelli, 1 - 20123 Milano

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Elenka Brenna

Istituto di Economia dell'Impresa e del Lavoro, Università Cattolica del Sacro Cuore

E-mail: elenka.brenna@unicatt.it

Abstract

In the very recent past, the Lombardy health care system - established on the quasi-market model – has caught the interest of researchers and politicians in different OECD countries[1]. The merits of the model, compared to other Italian regional models, are the control of health care spending and the balanced budget, in a frame of good quality of services and patient choice.

This paper stems from a literature review and tries to analyse the evolution of this regional system, the institutional path that brought to the implementation of the model, its theoretical basis, its merits and criticism. The period considered ranges from 1997, when the reform was enacted, to 2010.

Keywords: quasi-market, health care system, Italian NHS reforms

Jel classification: I18

[1] See for example the Wall Street Journal, Tuesday, April 13, 2010, R2

1. INTRODUCTION

In the Italian and international literature, the "Lombardy model" is always mentioned for its uniqueness, compared to the other Italian regional systems (Mapelli, 2000; Anessi Pessina et al., 2004; France et al. 2005). Indeed, with the regional law 31/1997 the legislator set a quasi market model, privileging the separation between purchaser and provider of health care and patient free choice. This analysis tries to investigate, with the help of a literature review, the main features of the Lombardy health care reform in 1997, and the evolution of the model in the following years.

In order to offer a complete perspective, the study embodies sources having different origins: scientific articles from national and international peer review journals, essays concerning specific aspects of the Lombardy health care system, legislative acts and Reports on the Italian National Health Service (INHS)[2]. Original data are shown in section four where the organization of the model is discussed. The analysis is built from an economic prospective, hence aspects such as the theoretical framework of the quasi market (QM) model, the financing criteria, the problem of incomplete information in a free choice context, are investigated. Only health care services are examined, with no regards to social services. The different steps that brought to the quasi-market choice are considered from the juridical, institutional and theoretical point of view, the main features of the model are highlighted as well as its merits and criticisms.

After this brief introduction, next section presents and analyses the health care reforms of the nineties in the Italian NHS, up to the process of devolution, the third section illustrates the main theoretical aspects of the QM setting according to the literature, while the fourth section explains, with the support of original data, the organization of the Lombardy model, the way it is financed, the role of its stakeholders as well as its merits and criticisms. Before the conclusions, the fifth section examines the merits and criticism of the model, as they emerge from the analysis. Despite the authors' efforts at providing a through vision of the Lombardy health care system, some aspects, mainly the technical ones (i.e. waiting list for hospital access), have been neglected, due to the choice to focus on structural aspects.

[2] Sources are mainly from national origin, due to the specificity of the issue.

2. THE MAIN REFORMS OF ITALIAN NHS

During the nineties the Italian NHS, on the basis of the 1991 British NHS reform, was deeply reformed by different regulatory acts to promote managerialism, regionalization, and to introduce competition criteria in the internal market (Fattore, 1999). These changes, briefly described herewith, prepared the field for the regional law 31/1997 and the setting of the internal market within the Lombardy health-care system. With the decree laws 502/92 and 503/93, the Local Health Units (LHUs), which represented the third level of Government after the Central Authority and the Regions, were transformed into public firms. General Managers were still appointed by the Region, but each LHU followed a management accounting and its own profit. LHUs larger hospitals were required to become independent hospitals, able to contract with LHUs for number and kind of services, and to compete among themselves and with accredited private hospitals. In order to improve regional autonomy, social contribution, till then devoted to national Fund, became a source of regional financing. The financing law of 1995 introduced the use of DRG as prospective payment for hospital activity. This method was functional to the new rules of the Italian NHS, such as the separation between provider and purchaser (Taroni 1997; Falcitelli and Langiano, 2004). The next decree law (446/97) established more autonomy in the regional health care financing: together with social contributions, which were replaced by a production tax (IRAP), a percentage of the personal income tax (IRPEF) was committed to regional financing. The 1999 health care reform (decree law 229/1999) had been designed to stress the main objectives of the Italian NHS in view of the imminent process of devolution, which started in 2000[3]. Specifically, it reaffirmed the original goals of universalism, comprehensiveness, and public funding of the INHS (France and Taroni, 2005), and highlighted the separate functions of central Government and Regions. With the decree law 56/2000, fiscal federalism was enacted, the national Fund was formally abolished, Regions were required to autonomously finance their Health Services and a new balancing Fund was created in order to compensate for cross-regional differences in fiscal capacity[4].

[3] For a brief overview of the principal steps that transformed the Italian NHS and introduced the devolution process see Caruso, 2009, for an in-depth examination of the fiscal federalism reform, see Dirindin and Pagano, 2001

[4]The National Health Fund has only been formally abolished. Actually, in 2005 it was still active and transferred part of the resources directly to the regions, driving other resources from the newly set balancing Fund, whose purpose was to redistribute financial flows from the richest to the poorest regions. The balancing Fund is financed by value added tax (VAT) revenues, the amount of which is set annually by the Government with the aim of ensuring that all regions have adequate financial resources for the minimum health care levels. For an analysis of the "missed fiscal reform", updated to 2006, see Caroppo and Turati (2007), pages 65 and following.

In 1997, Lombardy was the first Region to apply the decrees 502/92 and 517/93, with the setting of the quasi market model. The main features of the Lombardy health care system are the following (regional law 31/1997):

- Separation between health care purchasers and providers;
- Competition between public and private accredited providers in the presence of a third part payer;
- Patients' free choice between providers.

Furthermore, the principle of subsidiarity as a way of sharing competencies and activities between private actors, public sector and civil society (persons, families, and non-profit organizations), is deeply stressed (Colombo, 2008).

3. THE THEORETICAL FRAMEWORK OF QUASI MARKET IN HEALTH CARE AND ITS APPLICATION IN LOMBARDY

The theoretical principle of the quasi market model consists of introducing competition into the system, in order to improve the quality of services and to control health care expenditure (Oliver and Mossialos, 2005; Le Grand, 2007). Different authors consider the multiplicity of providers - both public and private accredited -, and the presence of an independent third part payer, as the most common features of QM models (Compagnoni, 2005; Longo, 2006). Purchasers have strong incentives to limit provisions by providers, while providers aim at increasing volumes and quality to attract patients. In this way, the possible distortions embedded in the publicly run systems should be avoided, or at least reduced (Le Grand, 1999; Anessi Pessina *et al.*, 2004). The basic intuition that the public sector can be the best insurer (granting financing and universal coverage), but not necessarily the best producer, involves very marginal, if any, delivering power for the Government and its territorial extensions (Petretto, 2009)[5]. The widespread, albeit not binding, use of fixed tariffs, leads to a competition on quality[6], while the negotiation on volume and typology of services between

[5] Petretto defines QM as a quite widespread specification of the contractual model, which is considered a variant of the mixed organizational model. Specifically, the author identifies three typologies of organizational models within industrialized countries: i) public model, equity oriented, financed by general taxation , with whole coverage; ii) private insurance model, such as USA pre-reform model, with private insurers and private providers, iii) mixed model, with essential levels of care managed by Government and mutual organizations for integrative services. This model, which can extend the coverage to the whole population, is widespread in most European countries, with different formulations, among which the contractual model.

[6] Not all the health care systems with patient choice referring to QM settings have fix payment for services. Some studies carried on in the UK and in the USA, show the difficulty in reaching homogeneous results when the prices vary. The presence of many variables (capacity of evaluating separately price and/or quality, heterogeneity of qualitative variables, presence or not of a third part payer, mix of financing subjects) makes the analysis of the results difficult to perform (Chernew *et al.*, 1998; Escarce *et al.*, 1999; Propper *et al*, 2002; Propper *et al.*, 2004).

third part payers and providers ensures transparency in the financing criteria and introduces planning as a tool of controlling health care expenditure. The mechanism works in the presence of strong budget constraints, enforced by tariff caps in cases where services and/or accesses override the planned budget. Patient's free choice is granted - from the supply side - by a network of different providers. The demand side is more controversial on this point, due to the problem of incomplete and asymmetric information, which does not allow a rational choice. Some authors suggest the presence of a subject (the general practitioner, a mutual insurer, or a kind of pilot figure, such as the *Patient Care Advisors* in the British NHS), with the specific role of empowering the patients – especially those in lower socioeconomic condition - in their free choice (Dixon and Le Grand 2006; Petretto, 2009).

Criticisms to the QM model are mainly directed to the use of fixed tariffs for inpatient services (Propper et. al, 2006). Many authors suggest that their use can introduce some distortions, such as cream-skimming, cherry picking, voluntary up-coding and skimping (Jones and Cullis, 1996; Ellis, 1998; Anessi Pessina et al. 2004; Fattore and Torbica, 2006; Petretto, 2009; Berta et al., 2010). These phenomena, as well as the bargaining on volume and typology of access, require a strong regulatory function on hospital activity, which in some cases is performed by *ad hoc* independent Authorities, the problem being then related to high transaction costs.

According to this theoretical framework, in 1997 Lombardy was the *only* Italian Region to choose the separation between purchasers and providers, and to support patient free choice, subscribing to the principle that "money follows the patient". The uniqueness of the Lombardy model is often mentioned in national and international literature. One of the first attempts to analyze the interregional differences after the 502/92 decree law, indicates Lombardy as the only Region to show hiven off hospitals[7] by the end of nineties (Mapelli, 2000). The same opinion is expressed by Anessi Pessina et al.(2004), who consider the Lombard health care system as a "notable exception" among all the regional systems. Mattei (2007) investigates the three Regions who accepted to undertake a reform during the nineties, Emilia Romagna, Tuscany and Lombardy. About the latter, the author focuses on the fusion process of LHUs (84 in 1995, 44 in 1995, 15 in 2005) and on their role of third part payers and contracting subjects against providers. France and Taroni (2005) underline the "almost total separation between purchasing and provision", Boni (2007), as well as France et al. (2005) argues about the peculiar choice of Lombardy in electing a separate model. Caroppo and Turati (2007) show a comparisons of different regional models based on funding, structural and organizational activity: in 2002 Lombardy distinguishes from the other Regions for having only 9% of beds in LHU's hospitals, compared to a maximum of 88% in Molise. From 1997 to 2003, Lombardy LHU's hospitals have been reduced from 93 to 1, while public

[7] Although the 1992 reform included all the health care services, authors' interest is often focussed on hospitals' main changes.

firm hospitals have been increased from 16 to 29. In the authors' regional health systems classification, based on the competitiveness within each, Lombardy is at the first place. Even with regard to the implementation of the DRG prospective payment, Lombardy is the first Region to adopt it, in part due to its hospitals' internal organization and accounting system (Agnello *et al*., 2003; Fattore and Torbica, 2006).

4. THE STRUCTURE OF THE LOMBARDY HEALTH CARE SYSTEM

4.1 Main steps to set the model

With the regional law 31/1997, the Lombardy health care system was reformed and became QM oriented, with the following internal organization (reg.law 31/1997): the Region raises and manages funds for health care, plans activities in cooperation with LHUs and monitors the delivery of minimum levels, which are set by the central Government. LHUs manage health care on the territory, through smaller units called Districts, and contracts volume and typology of services with providers. Providers - public, not for profit or private (accredited) - compete on production following the same rules. The newly set model empowers the Region with insurance and funding functions, the LHUs with programming and purchasing power, while production is performed by providers. Steps to set the Lombardy model implies i) the reorganization of the hospital network, ii) the definition of criteria for crediting the hospitals and iii) the arrangement of financing criteria. As already mentioned, from 1997 to 2003, LHUs hospitals diminish from 93 to 1, while public hospital firms increase from 16 to 29. A consistent number of privately owned hospitals and not for profit ones enter the system through an accreditation process. For the financial setting, the national rules provide that regions are funded and pay LHUs by capitation to cover minimum levels, letting each Region manage the internal distribution[8]. Next sections will examine in depth the different aspects of the Lombardy model. Specifically, section 4.2 describes the financing criteria and resource allocation of health care expenditure, section 4.3 develops the issue about the different roles of Region and LHUs, while section 4.4 shows some data of structure and activity.

4.2 Financial criteria, resource allocation and health care expenditure

In the national framework, the decree law 56/2000 introduces the process of fiscal federalism with the abolition of the National Health Fund[9], regional autonomy for funding health care and the creation of a balancing Fund to compensate for cross-regional differences in fiscal capacity.

The sources to finance the regional systems are: i) a percentage of the value added tax (VAT) revenues, which is dropped directly into the balancing Fund, ii) the production tax (IRAP), which represented a regional source since 1998, iii) some other minor voices, such as a percentage of personal income taxation, called IRPEF, and a tax on gasoline consumption

[8] While writing this paper, it has just been approved by the Italian Government a new rule for heath care financing, based on *standard costs* (see AGENAS, 2011).

[9] For the abolition of the National Health Fund, see note 4.

(Dirindin and Pagano, 2000; France *et al.*, 2005). Own source revenues covers almost 45% of regional expenditure, although there is still considerable variety among Regions. As shown in table 1, in 2003, excluding VAT and equalization process, Lombardy was at the first place for fiscal capacity, with a coverage capacity for current expenditure of 69% against a value of 26% for Calabria, at the bottom place. Adding VAT revenues, Lombardy reaches 87% of coverage and Calabria 51%, but, after passing through the equalization mechanism, the situation appears completely overturned: Calabria, driving sources from the balancing Fund, is able to cover almost 91% of its health care need, while Lombardy, who runs for solidarity, remains at the same coverage level, 87% (Caruso, 2009).

Table 1: Fiscal coverage by regions* : years 2001-2003

REGIONS	fiscal coverage for current expenses with own taxation				fiscal coverage for current expenses with own taxation plus VAT				fiscal coverage for current expenses after perequation			
	2001	*2002*	*2003*	average	*2001*	*2002*	*2003*	average	*2001*	*2002*	*2003*	average
Piemonte	–	50,0	55,0	52,5	85,7	80,2	87,3	84,4	85,7	80,2	87,3	84,4
Lombardia	–	73,4	68,6	71,0	82,0	92,3	86,9	87,1	82,0	92,3	86,9	87,1
Veneto	–	57,3	59,2	58,2	81,1	86,6	90,8	86,2	81,1	86,6	90,8	86,2
Liguria	–	41,0	37,9	39,5	70,7	80,3	81,6	77,5	77,7	88,2	88,9	85,0
Emilia-Romagna	–	50,2	52,5	51,3	88,1	76,5	80,7	81,8	88,1	76,5	80,7	81,8
Toscana	–	50,4	49,7	50,0	80,8	90,3	92,2	87,8	80,8	90,3	92,2	87,8
Umbria	–	42,7	39,8	41,3	84,5	75,6	73,3	77,8	97,3	90,6	86,0	91,3
Marche	–	43,3	51,6	47,5	80,6	75,7	90,9	82,4	82,1	76,2	92,1	83,5
Lazio	–	47,1	45,9	46,5	73,4	79,0	75,0	75,8	73,4	79,0	75,0	75,8
Abruzzo	–	42,3	38,4	40,4	68,0	77,1	68,3	71,1	85,5	100,6	88,7	91,6
Molise	–	31,5	32,6	32,1	66,7	62,8	59,9	63,1	100,8	96,8	95,7	97,8
Campania	–	32,0	27,2	29,6	50,7	62,6	52,3	55,2	75,5	94,6	82,0	84,0
Puglia	–	29,2	31,7	30,4	60,0	60,7	65,5	62,1	87,1	84,1	96,7	89,3
Basilicata	–	29,5	31,5	30,5	49,9	54,0	57,2	53,7	83,3	88,8	94,2	88,8
Calabria	–	25,4	25,8	25,6	58,1	52,1	51,5	53,9	88,9	92,6	90,9	90,8
North	–	54,4	54,7	54,5	81,5	83,2	85,5	83,4	82,9	84,8	86,9	84,9
Centre	–	45,9	46,8	46,3	79,8	80,2	82,8	81,0	83,4	84,0	86,4	84,6
South	–	31,6	31,2	31,4	58,9	61,5	59,1	59,9	86,9	92,9	91,4	90,4

Source: Adaptation from Caruso 2009, pag.121

* Autonomous regions excluded

In addition to the fiscal revenues, regional money could be transferred from other public sector units such as Government's administrations and municipalities. LHUs can also drive

resources from their own activities (copayment on secondary care and pharmaceuticals, plus some chargeable activities). Each Region decides autonomously whether to increase the production (IRAP) and/or personal income taxation (IRPEF) share, as well as copayment, to cover its health care deficit. Lombardy is one of the few Regions that, during the last years, made use of all these tools and strictly controlled health care expenditure in order to break even. Recently revised data from the Ministry of Health show little negative per capita balance for the year 2005, almost balanced for 2006 and positive for 2007 and 2008, as shown in table 2. Compared to other regions, especially Lazio and the southern ones, Lombardy has been able to control its balance. These results have been achieved without any Government intervention: actually Lombardy is one of the very few regions, together with Aosta Valley, Friuli and Bolzano, to be excluded from ex post funding plans since 2003.

Table 2: Annual regional balance for health care services: years 2005-2008

REGIONS	2005		2006		2007		2008	
	Balance (millions euro)	Per capita (euro)	Balance (millions euro)	Per capita (euro)	Balance (millions euro)	Per capita (euro)	Balance (millions euro)	Per capita (euro)
PIEMONTE	0.874	0	-7.174	-2	30.690	7	2.621	1
V. AOSTA	-13.914	-113	-13.517	-109	-13.527	-108	-15.370	-123
LOMBARDIA	-14.285	-2	-4.325	-0	9.810	1	21.177	2
PA* BOLZANO	28.061	59	25.272	52	22.403	46	15.039	31
PA* TRENTO	-2.840	-6	-14.072	-28	-8.478	-17	-2.125	-4
VENETO	-114.098	-24	71.385	15	75.417	16	16.175	3
FRIULI	27.169	23	18.297	15	39.476	32	7.615	6
LIGURIA	-253.757	-159	-100.119	-62	-141.810	-88	-109.478	-68
E. ROMAGNA	-16.303	-4	-38.418	-9	25.926	6	7.191	2
TOSCANA	-14.986	-4	-120.619	-33	42.244	12	39.272	11
UMBRIA	-8.236	-10	-40.647	-47	6.886	8	16.700	19
MARCHE	-18.297	-12	-38.953	-25	15.022	10	18.808	12
LAZIO	-1,737.346	-330	-1,970.862	-365	-1,613.931	-292	-1,638.804	-297
ABRUZZO	-240.919	-185	-140.414	-107	-151.467	-115	-87.795	-67
MOLISE	-139.375	-433	-58.787	-183	-66.630	-208	-73.198	-228
CAMPANIA	-1,792.586	-310	-761.088	-131	-863.694	-149	-496.630	-86
PUGLIA	-411.945	-101	-169.904	-42	-312.846	-77	-414.395	-102
BASILICATA	-42.762	-72	-22.100	-37	-17.588	-30	-25.804	-44
CALABRIA	-79.106	-39	-34.933	-17	-125.235	-63	-113.585	-57
SICILIA	-563.147	-112	-932.453	-186	-573.879	-114	-331.751	-66
SARDEGNA	-327.078	-198	-129.928	-78	-22.483	-14	-37.798	-23
ITALY	-5,734.877	-98	-4,483.359	-76	-3,643.693	-61	-3,202.135	-54

Source: elaboration of data from Ministry of Health
*PA: Provincia Autonoma: Autonomous territorial Authority

Strict control of public health expenditure is one of the policies enacted by the Lombardy government to control the budget. During the last decade per capita values have been below the national average, as shown by different studies (Caruso 2009; Jommi and Lecci, 2008) and confirmed by data reported in table 3 for the years 2006 – 2009. Interregional differences are still pronounced: northern regions – except Lombardy and Veneto– show higher values, while southern ones spend less then the national average.

Table 3: Public per capita expenditure at regional level*, year 2006- 2009 – euro

REGIONS	2006	2007	2008	2009
PIEMONTE	1,715	1,766	1,828	1,880
AOSTA	1,971	1,969	2,058	2,089
LOMBARDIA	***1,614***	***1,685***	***1,726***	***1,763***
PA BOLZANO	2,104	2,170	2,232	2,170
PA TRENTO	1,783	1,849	1,926	2,028
VENETO	1,655	1,688	1,726	1,782
FRIULI	1,639	1,770	1,885	1,961
LIGURIA	1,837	1,925	1,970	2,024
E. ROMAGNA	1,739	1,795	1,845	1,903
TOSCANA	1,708	1,750	1,804	1,846
UMBRIA	1,683	1,709	1,761	1,798
MARCHE	1,598	1,635	1,677	1,750
LAZIO	1,982	1,968	1,981	1,974
ABRUZZO	1,691	1,770	1,773	1,778
MOLISE	1,841	1,941	2,030	2,080
CAMPANIA	1,592	1,674	1,724	1,737
PUGLIA	1,537	1,657	1,736	1,747
BASILICATA	1,542	1,642	1,719	1,750
CALABRIA	1,492	1,712	1,678	1,732
SICILIA	1,675	1,658	1,645	1,671
SARDEGNA	1,588	1,627	1,742	1,797
TOTAL	1,682	1,740	1,782	1,816

Source: elaboration of data from Ministry of Health

*Interregional mobility not included

Tab 4a: Public, out of pocket, total health expenditure as a percentage of GDP – years 2001-2003

REGIONS AND GEOGRAPHICAL AREAS	2001			2002			2003		
	Pub.	*Out of pocket.*	*Tot*	*Pub.*	*Out of pocket.*	*Tot*	*Pub.*	*Out of pocket.*	*Tot*
Lombardy	***4.43***	***1.73***	***6.15***	***4.61***	***1.78***	***6.38***	***4.4***	***1.76***	***6.17***
Northern reg.	4.91	1.84	6.75	5.07	1.91	6.98	5.04	1.91	6.95
Central reg.	5.71	1.82	7.53	5.7	1.85	7.55	5.86	1.85	7.7
Southern reg.	8.51	2.07	10.6	8.65	2.1	10.7	8.68	2.13	10.8
Italy	5.95	1.89	7.84	6.07	1.94	8.01	6.1	1.95	8.04

Source: Istat, national accounts

Tab 4b: Public, out of pocket, total health expenditure as a percentage of GDP – years 2003-2006

REGIONS AND GEOGRAPHICAL AREAS	2004			2005			2006		
	Pub.	*Out of pocket.*	*Tot*	*Pub.*	*Out of pocket.*	*Tot*	*Pub.*	*Out of pocket.*	*Tot*
Lombardy	***4.69***	***1.75***	***6.44***	***4.82***	***1.75***	***6.58***	***4.97***	***1.73***	***6.71***
Northern reg.	5.32	1.88	7.19	5.46	1.87	7.33	5.56	1.86	7.42
Central reg.	6.2	1.81	8	6.44	1.81	8.25	6.61	1.79	8.4
Southern reg.	9.16	2.09	11.3	9.67	2.09	11.8	9.78	2.05	11.8
Italy	6.43	1.91	8.34	6.68	1.91	8.59	6.8	1.89	8.69

Source: Istat, national accounts

Tables 4a/b report Lombardy health expenditure over the regional GDP, disaggregated into public and private (out of pocket) share, and the average levels of each geographical areas, respectively North, Center and South of Italy. Even if caution should be paid in such comparisons, due to the still pronounced interregional differences in productivity levels, these results reveal the efforts of Lombardy Government in controlling health care expenditure. Such restrains could however provoke a shift toward the private access. Table 5 shows health expenditure of households as a percentage of total health expenditure, by regions, during the years 2001-2006. Lombardy values are quite above the national benchmark during the whole period, and collocate this region at the second place for private health expenditure share, after Friuli Venetia Giulia. During the last three years, a trend inversion is shown, which is common to almost all the regions.

Tab 5: Health expenditure of households as a percentage of total health expenditure by region - Years 2001-2006

REGIONS AND GEOGRAPHICAL AREAS	2001	2002	2003	2004	2005	2006
Piemonte	27.93	27.93	27.58	26.00	25.30	24.77
Valle d'Aosta	23.80	23.87	24.30	21.96	21.90	21.21
Lombardia	***28.05***	***27.84***	***28.61***	***27.19***	***26.64***	***25.85***
Trentino-Alto Adige	23.21	23.07	22.18	21.10	21.50	20.89
Veneto	26.32	26.81	26.43	25.25	24.26	23.66
Friuli-Venezia Giulia	28.40	28.56	28.93	27.40	27.85	28.24
Liguria	22.81	24.10	23.47	22.40	21.40	21.42
Emilia-Romagna	28.80	28.45	28.44	27.26	26.98	26.81
Toscana	24.22	24.55	24.82	23.61	23.49	22.98
Umbria	20.87	20.44	20.33	19.55	19.36	18.98
Marche	24.04	24.14	24.67	23.69	23.05	21.31
Lazio	24.56	25.10	23.82	22.11	21.07	20.77
Abruzzo	19.38	19.16	18.31	18.69	17.36	17.19
Molise	19.90	19.97	20.19	19.72	17.30	18.16
Campania	19.14	19.56	19.54	18.08	17.33	17.58
Puglia	20.86	21.29	21.82	20.59	19.46	18.69
Basilicata	17.75	17.41	17.06	16.20	15.66	15.06
Calabria	20.94	21.36	21.88	21.44	20.33	20.21
Sicilia	18.95	18.06	18.24	16.97	16.46	15.18
Sardegna	18.69	18.59	18.57	17.89	17.57	17.64
NORTH	***27.32***	***27.37***	***27.43***	***26.10***	***25.55***	***25.06***
CENTRE	***24.13***	***24.47***	***23.98***	***22.58***	***21.91***	***21.37***
SOUTH	***19.57***	***19.56***	***19.67***	***18.60***	***17.78***	***17.35***
ITALY	***24.14***	***24.25***	***24.21***	***22.95***	***22.25***	***21.77***

Source: Istat. national accounts

With regards to resource allocation, given the rule that each Region decides how to distribute the total funding set by the Government to cover the essential levels, the Lombardy internal criteria to finance each LHU are the following: 75% of capitation fee is based on previous expenses, 16% on demographic criteria (8% over 65, 8% chronic diseases), 9% on geographical criteria (Regole, 2009). Despite the progress in reducing the share of "historical expenditure" from 100% to 75%, this principle is nonetheless criticized for the risk of reproducing possible inappropriateness[10]. Consistently with the separate model, LHUs are paid by capitation plus no chargeable functions (i.e. research activity), while providers are financed by LHUs on a fee for service basis: DRG for hospital discharges, and tariffs for outpatient services. Capitation fee is thought to cover essential levels and in Lombardy it funds approximately 84% of total health care expenditure. Few other functions, specifically

[10] In Italy the debate on the necessity to fund health care with parameters different from the past expenditure, has been going on for many years and it is still far from being resolved (Turati, 2003, Mapelli, 2007, AGENAS, 2009).

social services, administrative costs for managing regional Fund, research activity, LHUs extra budget funding (in case of demand exceeding the supply, or specific emergency situation) are financed directly by the regional Fund (Brenna, 2007; Regole, 2009). Table 6 shows the resource allocation among macro areas to cover minimum levels (year 2009). Notice that mobility - the balance flaw between region and out of region admissions - has a quite significant impact and is frequently used to covers deficits between health care costs and revenues.

Table 6: Resource allocation to cover minimum levels (million euro) – year 2009

Level of care	**Resources (million euro)**	**Planned incidence**
1 – prevention	856	5.5%
2 – territorial care	7.941	At least 51%
3 – hospital care	6.773	Up to 43.5%
TOTAL	15.570	100%
Active mobility* (balance)	480	
	16.050	

Source: Regole 2009, Delibera n. VIII/501, del 26/11/2008
* Mobility is the balance flow between region and out of region admissions for, respectively, non-resident and resident patients.

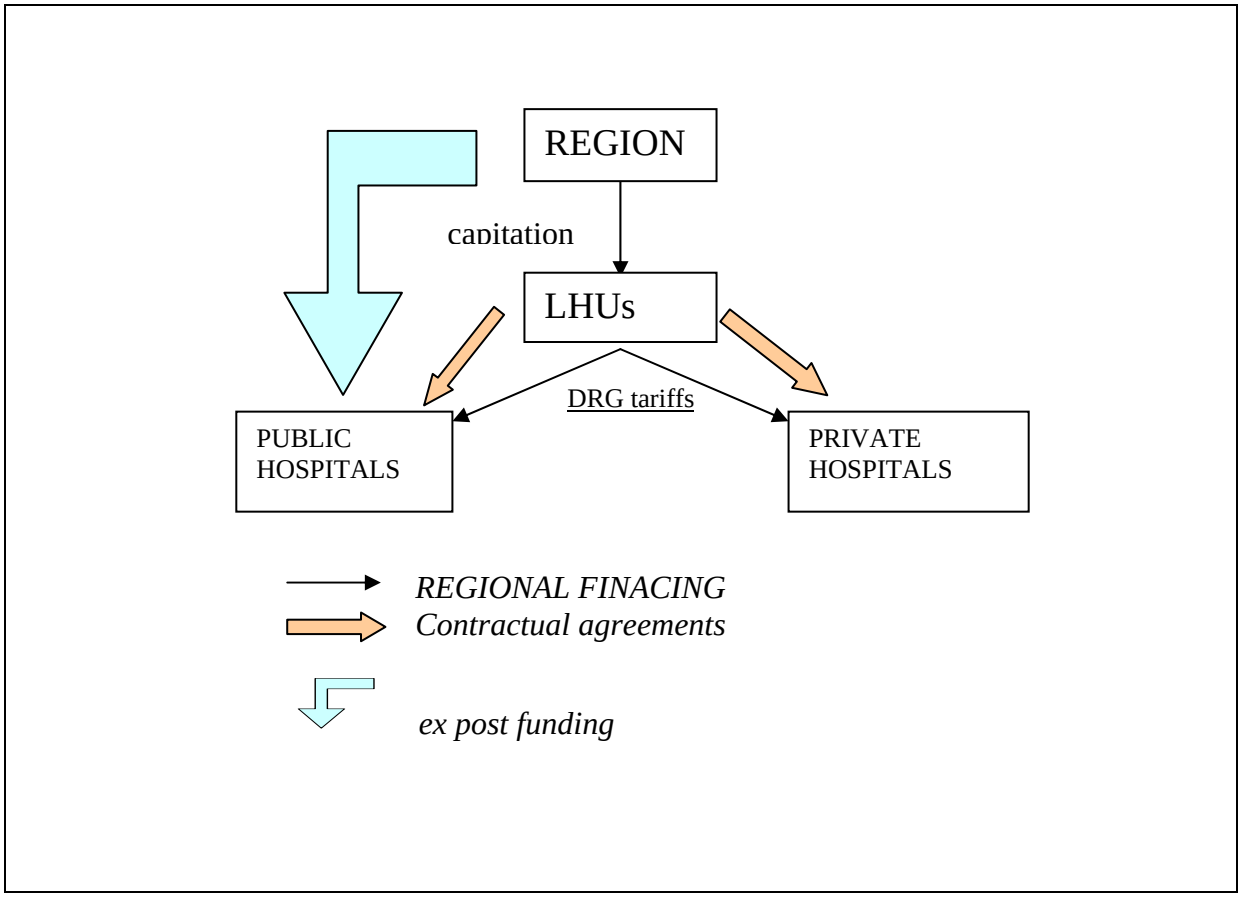
4.3 Internal organization and actor's role

Although the Lombardy health care system is quasi market oriented, two kinds of problems seem to have inhibited the concept of free competition during these years. Both of them can be related to the role of the Region and its difficulty in releasing power to the LHUs, and each characterizes a temporal phase of the newly set model. Very briefly, during the first time, from 1998 to 2004, free competition is enacted but the Region intervenes with ex post funding toward those public hospitals that override their budget. The second phase is introduced by a legislative act – the regional decree 12287/03 – which, in an attempt to control the phenomenon of overrunning by public hospitals, ends up with completely frustrating the concept of free competition and still affirms the Region's right of allocating resources. A deeper examination will help to understand the issue. Starting with the first stage, the regional law 31/1997 and the subsequent regional decree 34437/98[11] defined precisely the work-sharing between Region and LHUs and established that each LHU should contract with the

[11] Specifically, the law 31/1997 establishes the division of responsibilities, while DGR 34437/1998 defines the contracting power of LHUs.

hospitals the number and typology of admissions, eventually imposing tariff caps for those admissions exceeding the planned number. Of course the same rules should be granted for accredited and public providers. In fact, at least up to 2004, it was the Region who decided how to allocate resources between providers, without letting the LHUs the contracting power that would guarantee free competition (Anessi Pessina et al., 2004; Brenna, 2007; Boni, 2007; Bordignon and Hamui, 2007; Caroppo and Turati, 2007).

Figure 1: **Region and LHUs functions – regional law 31/1997, DGR 34437/1998**

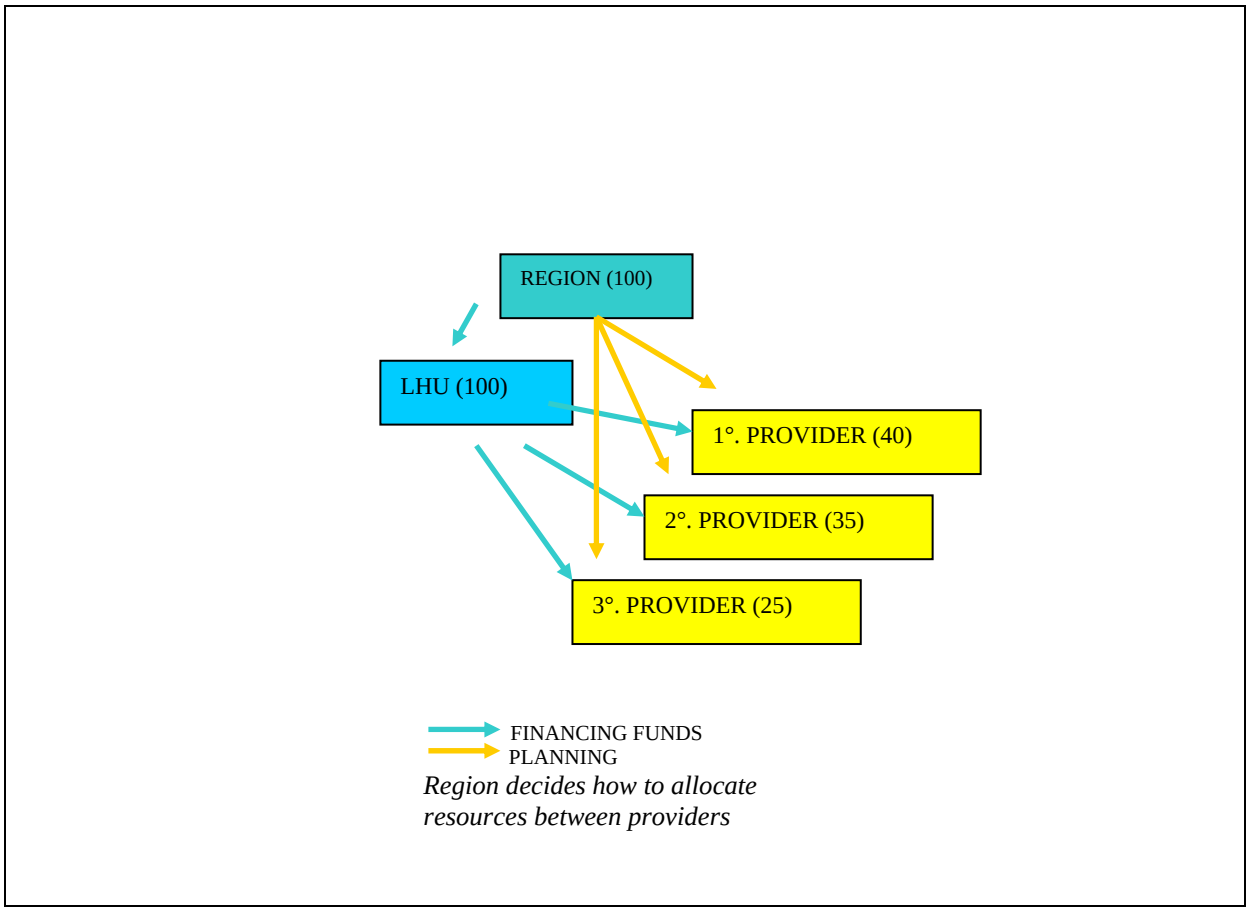


Source: Brenna, 2007

As shown in figure 1, according to the law, the Region provides each LHU the capitation fees to cover minimum levels, then each LHU contracts with providers and performs its institutional function of Programming Acquiring and Controlling (PAC). Strict timing in approving public hospital's budget should be respected, and no inference from Region should be admitted. Unfortunately, the law 31/1997 also allows the Region to intervene with ex-post funding for those public hospitals which override their budget. The result is that, at least up to 2004, tariff caps have been applied mainly to private hospitals, while public hospitals which overrode their budget were rescued by the Region funding. This framework raises three controversial issues: the distort incentives for public hospitals due to ex post funding, the

discrimination against private accredited ones[12], the lack of transparency in financial flows, since ex post funding drives resources directly from the regional Fund, bypassing the capitation fee. Figure 2 shows that the factual role of each LHU is that of transferring resources within an allocation already established by the Region.

Figure 2: **Role of LHU in hospital planning before DGR 12287/03**



Source: Brenna, 2007

Possibly in an attempt to grant the LHUs the role they claimed, the regional decree 12287 of 4th march 2003 set new rules for regulating the contracts between LHUs and hospitals: tariffs, typology and number of admission should be established at the beginning of the year. Indeed this new rule, instead of empowering LHUs with contracting power, enforced the idea of an overall allocation between providers, with no space for free competition (Brenna, 2007; Boni, 2007). The latter phase of the Lombardy health care system is characterized by a resource allocation set on historical expenditure, without possibility of contracting. The system ensures a good control of health care expenditure, but competition is highly penalized.

[13]This fact led to a legal act brought by private hospitals against the Region, which ended with the commitment to refund the formers.

4.4 Some data of structures and activity

The Lombardy health care system has to be distinguished from other regional systems for the number of residents and the volume of activity, as highlighted here below. It provides health care to 9.5 million people, which is almost 1/6 of national population. The age distribution is not very dissimilar from the national one, with the exception of the extremes - the youngest and the oldest categories – a bit below the national average (table 7). For ageing people, considering the relatively high presence of 65-74 people and the value in absolute terms, this category requires an adequate supply of services.

Table 7: Resident population - year 2007

REGIONS	Age 0-14	Age 15-44	Age 45-64	Age 65-74	More than 75	Total
Piemonte	12.5	37.9	26.9	12.0	10.7	4,352,828
Valle d'Aosta	13.4	39.6	26.6	10.7	9.7	124,812
Lombardia	**13.8**	**40.5**	**26.1**	**10.8**	**8.9**	**9,545,441**
Bolzano	16.9	42.2	23.9	9.1	7.9	487,673
Trento	15.4	39.8	25.9	9.5	9.4	507,030
Veneto	14.0	40.6	26.0	10.2	9.2	4,773,554
Friuli Venezia Giulia	12.1	37.7	27.3	11.7	11.1	1,212,602
Liguria	11.2	35.1	27.1	13.3	13.4	1,607,878
Emilia Romagna	12.6	38.6	26.0	11.4	11.4	4,223,264
Toscana	12.3	37.9	26.5	11.6	11.7	3,638,211
Umbria	12.6	38.2	25.9	11.5	11.9	872,967
Marche	13.1	38.9	25.4	11.2	11.4	1,536,098
Lazio	13.9	40.7	26.0	10.5	8.9	5,493,308
Abruzzo	13.3	40.1	25.2	10.6	10.7	1,309,797
Molise	13.1	39.8	25.1	10.9	11.2	320,074
Campania	17.3	43.7	23.5	8.4	7.1	5,790,187
Puglia	15.5	42.3	24.6	9.4	8.2	4,069,869
Basilicata	14.2	41.4	24.3	10.4	9.6	591,338
Calabria	15.0	42.2	24.3	9.6	8.8	1,998,052
Sicilia	15.9	41.7	24.2	9.5	8.6	5,016,861
Sardegna	12.7	42.5	26.9	9.8	8.2	1,659,443
Italia	14.1	40.4	25.6	10.5	9.5	59,131,287

Source: Ministry of Health, on Istat data

Hospital care – The publicly funded separate model has encouraged the presence of different institutional typologies of providers, which can be grouped into three main categories: i) the public hospital firms, ii) the IRCCS (Istituto di Ricovero e Cura a Carattere Scientifico), whose activity is partly devolved to research, and whose ownership can be public, private or not for profit, iii) the privately owned – profit and not for profit - accredited hospitals, which offer their services to the regional system. According to the last update (2007), public hospital firms are 29, each managing several local hospitals (97), private accredited structures are 73, while IRCCS are 23; including other minor categories, mainly private non accredited, the total number of hospital providers - among public, not for profit and private subjects - amounts to 220, as shown in table 8.

Table 8: different typologies of providers, Lombardy, year 2007

Public hospitals firms*	Private accredited hospitals	IRCCS	Other providers	Tot providers
97	73	23	27	220

Source: elaboration of data from Ministry of health

* total number of providers grouped in 29 firms

For what is concerning beds supply, they are grouped into two main categories: beds for acute care and beds for rehabilitation and long stay.

Table 9 shows the beds' distribution among public hospitals and private accredited ones (rates over 10,000 inhabitants, year 2005). For aggregate values (first column) Lombardy distribution is very similar to the northern benchmark. The peculiarity of the Lombardy model emerges when analysing disaggregated data. This region presents a higher concentration of private accredited beds (8.98) if compared to the North area (6.79), and even if compared to the national value (7.98). A deeper investigation on the concentration of private accredited beds among Italian regions shows a very heterogeneous framework (table 10). Lombardy presents 22.4 % of private accredited beds, against a Northern average of 17 %. However, central and southern regions present values of respectively 23.61 % and 23.67 %. Not surprisingly private providers are specialized in rehabilitation and long stay, where financial risk is lower and there is boundary for profits.

Table 9: Public and private "accredited" hospital beds per 10,000 inhabitants by region - Year 2005

REGIONS AND GEOGRAPHICAL AREAS	Total			Public Hospitals			Private accredited hospitals		
	Total	For acute care	For long stay and rehabilitation	Total	For acute care	For long stay and rehabilitation	Total	For acute care	For long stay and rehabilitation
Piemonte	38.73	30.13	8.60	30.47	26.16	4.31	8.27	3.97	4.30
Valle d'Aosta	33.71	33.71	0.00	33.71	33.71	0.00	0.00	0.00	0.00
Lombardia	**40.11**	**33.73**	**6.38**	**31.13**	**27.59**	**3.54**	**8.98**	**6.14**	**2.84**
Trentino	44.15	35.19	8.96	36.24	33.28	2.96	7.91	1.91	6.00
Bolzano	42.28	36.39	5.90	35.95	34.66	1.29	6.34	1.73	4.61
Trento	45.94	34.04	11.90	36.52	31.96	4.56	9.42	2.08	7.34
Veneto	37.62	31.98	5.64	35.32	30.33	4.99	2.30	1.65	0.65
Friuli-Venezia Giulia	36.25	34.27	1.97	31.57	30.13	1.44	4.67	4.14	0.53
Liguria	40.44	37.22	3.22	39.71	36.93	2.77	0.73	0.28	0.45
Emilia-Romagna	43.46	34.69	8.77	35.18	30.32	4.87	8.28	4.38	3.90
Toscana	36.56	33.70	2.86	31.60	30.28	1.32	4.97	3.42	1.54
Umbria	30.73	29.27	1.46	28.26	27.14	1.12	2.47	2.13	0.34
Marche	38.90	33.71	5.20	32.38	29.61	2.77	6.52	4.10	2.43
Lazio	47.88	37.61	10.27	32.53	29.86	2.67	15.35	7.75	7.60
Abruzzo	41.68	37.93	3.75	34.97	33.40	1.57	6.71	4.53	2.18
Molise	52.20	44.83	7.37	46.20	41.63	4.57	6.00	3.20	2.80
Campania	31.56	28.65	2.91	21.50	20.93	0.58	10.06	7.72	2.33
Puglia	36.17	32.32	3.86	30.98	27.94	3.04	5.19	4.38	0.82
Basilicata	31.40	29.87	1.53	30.39	28.86	1.53	1.01	1.01	0.00
Calabria	38.71	33.85	4.86	22.45	21.98	0.47	16.26	11.86	4.39
Sicilia	34.43	32.45	1.98	26.56	25.21	1.35	7.87	7.24	0.63
Sardegna	42.73	41.59	1.14	34.64	34.25	0.39	8.09	7.34	0.75
NORTH	***39.93***	***33.27***	***6.66***	***33.14***	***29.19***	***3.95***	***6.79***	***4.08***	***2.71***
CENTRE	***41.74***	***35.20***	***6.54***	***31.89***	***29.75***	***2.13***	***9.85***	***5.44***	***4.41***
SOUTH	***35.69***	***32.69***	***3.00***	***27.20***	***25.83***	***1.37***	***8.48***	***6.86***	***1.63***
ITALY	***38.78***	***33.44***	***5.34***	***30.80***	***28.11***	***2.69***	***7.98***	***5.33***	***2.65***

Source: Istat elaborations on Ministry of health data

Table 10: Percentage of private "accredited" hospital beds by region - Year 2005

REGIONS AND GEOGRAPHICAL AREAS	*Total*	*For acute care*	*For long stay and rehabilitation*
Piemonte	21.34	13.17	49.96
Valle d'Aosta	0.00	0.00	0.00
Lombardia	**22.40**	**18.22**	**44.51**
Trentino-Alto Adige	17.91	5.42	66.97
Bolzano-Bozen	*14.98*	*4.75*	*78.09*
Trento	*20.51*	*6.11*	*61.68*
Veneto	6.12	5.16	11.53
Friuli-Venezia Giulia	12.90	12.09	26.89
Liguria	1.81	0.76	13.95
Emilia-Romagna	19.05	12.62	44.49
Toscana	13.59	10.16	53.92
Umbria	8.03	7.28	23.02
Marche	16.77	12.15	46.72
Lazio	32.06	20.61	74.00
Abruzzo	16.10	11.95	58.08
Molise	11.50	7.15	37.97
Campania	31.86	26.96	80.21
Puglia	14.35	13.54	21.16
Basilicata	3.21	3.37	0.00
Calabria	42.00	35.05	90.37
Sicilia	22.86	22.30	31.89
Sardegna	18.93	17.65	65.96
Nord	**17.01**	**12.28**	**40.68**
Centro	**23.61**	**15.47**	**67.39**
Mezzogiorno	**23.77**	**20.98**	**54.26**
ITALIA	**20.58**	**15.93**	**49.68**

In order to offer a dynamic view, table 11 reports the beds' trend in the decade after the implementation of the Lombardy model: a drastic reduction of acute beds in favour of day hospital and rehabilitation is shown. Increasing in day hospital activity is common to many regions and follows the national directives on a more appropriate use of hospital admissions. The raise in rehabilitation beds indicates the presence of a large number of elderly people and people affected by chronic diseases. This last typology of patients is 30% of the whole population and is responsible for 70% of health care expenditure (Regole, 2009; Mapelli, 2005). Acute beds cuts affect almost exclusively public hospitals and can be linked to the embedding of smaller hospitals within bigger structures after the law 31/1997. This consideration is confirmed by the data reported in the last row of table 10: only public hospital firms suffered bed reduction (2,150). These cuts are more than compensated by a beds' increase within IRCCS (2,250). As expected, the entrance in the regional system by

accredited hospitals brought new beds, mainly in the geriatric structures, where the presence of private and not for profit sector is prominent. The overall balance is positive and totals 1,130 new beds in the decade 1997-2006.

Table 11: **Beds' trend, Lombardy, 1997-2006**

	Public hospital firms	IRCCS	Accredited hospitals (private/NFP)	Geriatric hospitals (public, NFP, private)	total
Acute beds	- 5,000	+ 1,200	+50	-600	-4,350
DH beds	+800	+150	+150	+350	+1,450
Rehabilitation	+1,700	+700	+20	+900	+3,320
Rehabilitation - DH	+150	+100	+10	+50	+310
Palliative treatment	+200	+100		+100	+400
Total	-2,150	+2,250	+230	+800	+1,130

Source: Lucchina and Zangrandi, 2008

*NFP: not for profit

As a consequence of the central government policy and the reallocation of beds, in the decade after the implementation of the Lombardy model, ordinary admissions decreased by 183,900 while day hospital activity increased its admissions by 111,100, as shown in table 12.

Table 12: Admissions trend, Lombardy, 1997-2006

	Day Hospital	Ordinary admissions
1997	481,100	1,645,800
2006	592,200	1,461,900
diff	111,100	-183,900

Source: Lucchina and Zangrandi, 2008

The flow of patients from other Regions reveals a good quality of hospital services: more than 10% of services are supplied to individuals from other Regions, with an increase of up to 50% for complex treatments, especially in oncologic and cerebrocardiovascular activities (Lucchina and Zangrandi, 2008).

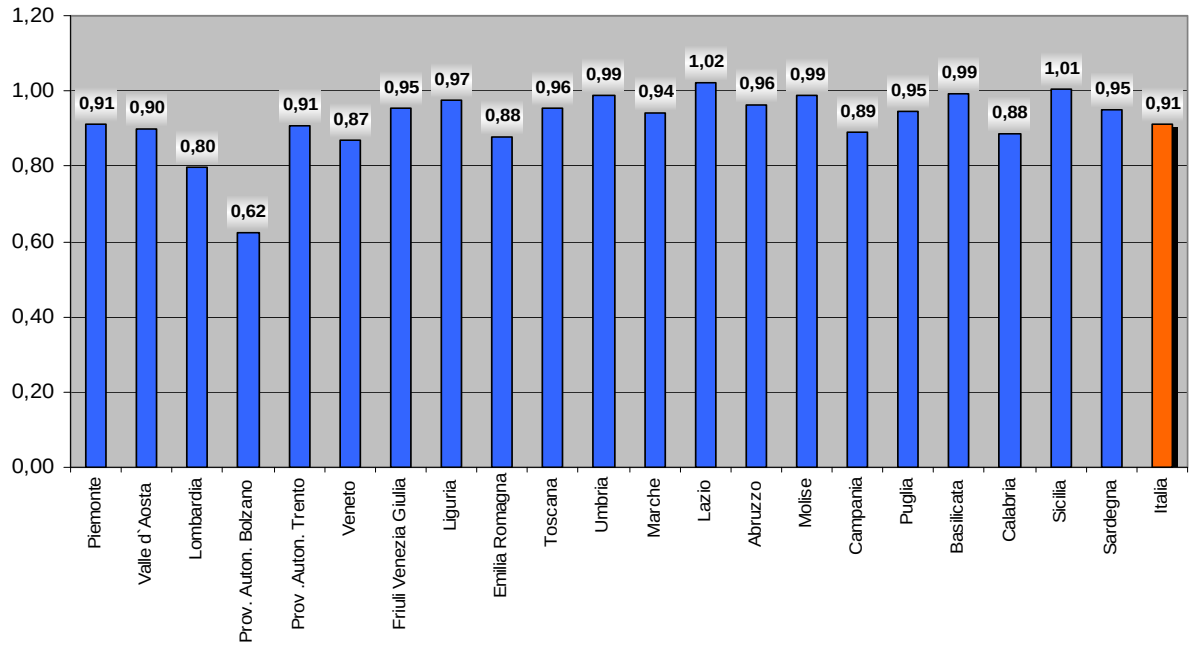
For hospital funding, literature reports many contributes on the use of perspective payment and DRG tariffs. As known, if no controls are enacted, this system can drive to some distortions, such as excess in surgical interventions (Brenna, 2006), not recommended decrease in the length of stay (France *et al*,, 2005), the specialization of some providers in more remunerative and riskless areas, as well as the more diffuse phenomena of cream skimming, voluntary up-coding and cherry picking. According to Propper et al, (2006) these phenomena exist whether or not competition is enacted, but are intensified with internal market for two main reasons: i) the heterogeneity of scopes characterizing each category of providers, respectively public, not for profit and private, ii) the need - peculiar to internal market - to improve information on quality, that push hospitals to select patients in order to show better outcomes. Although Lombardy is one of the few Regions which implemented a monitoring system on admissions' appropriateness, with financial disincentives for hospitals showing high rates of inappropriateness, the problems of up-coding and correlates, tightened by the presence of providers moved from different incentives, remain difficult to control. A recent study on Lombardy's admissions suggests that private hospitals are more subject to cream skimming than not for profit and public ones, there are no significant differences about up-coding among the three categories, while not for profit structures present more frequently repeated admissions (Berta *et al*,, 2010).

Territorial care – In Lombardy there are 15 LHUs organized in 86 Districts, which are smaller divisions responsible for territorial care within their area. Each District manages the primary, ambulatory, domiciliary and residential care of about 40,000 people, up to 100,000 in metropolitan areas. In addition, it controls the supply of services for specific pathologies such as HIV, mental diseases, Alzheimer, and other chronic diseases, and is responsible for assistance in the detention centres (D'Adamo and Giordano, 2008; Marceca and Orzella, 2008). Particular attention is devolved to oncology. In 2006 a new oncology net was created in order to connect all the providers and singular doctors who do prevention and assist people affected by oncologic diseases (IReR, 2010). Largely debated is the issue of the integration between hospitals and territory (Longo, 2006): the new regional directives focus on the need to increase the territorial network, in order to avoid that patients affected by chronic diseases would station in hospitals..

Primary care - Primary care is carried out by 6,638 general practitioners, with a rate of 0.80 over 1,000 populations, versus a national rate of 0.91 (data 2007). Figure 3 shows the

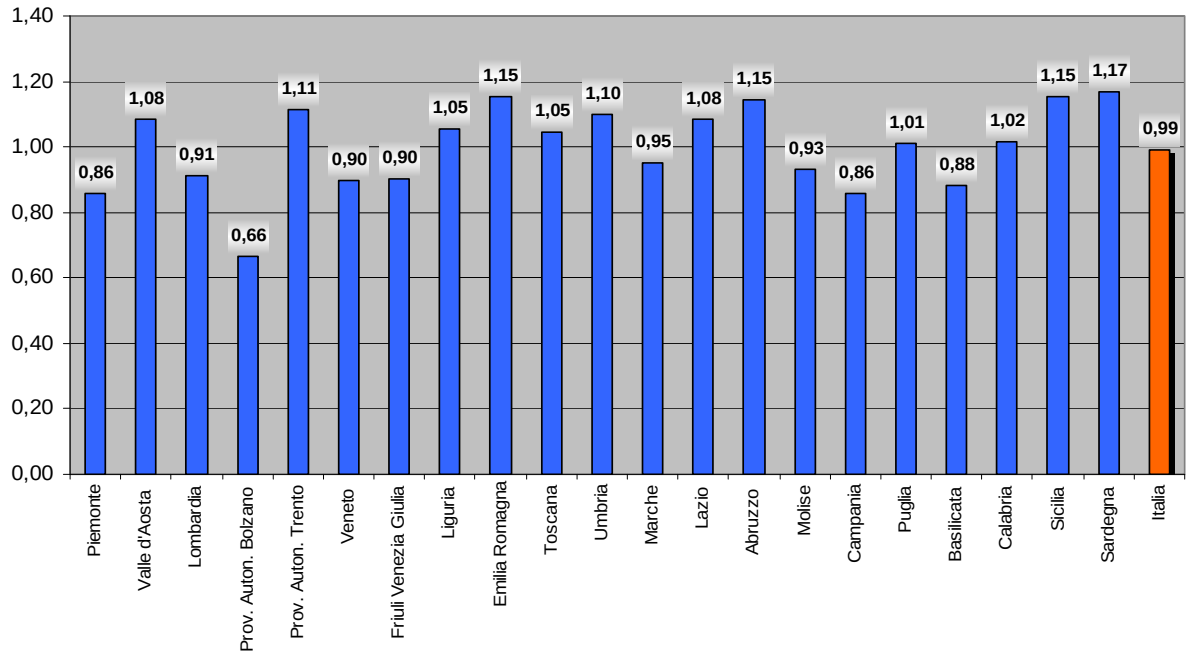
distribution of this rate among regions: Lombardy is at the second place for minimum number of GPs, after Bolzano. For paediatricians, they are 1,122 with a rate of 0.91, still below the national value (Figure 4). Despite the importance of these subjects in addressing the demand, especially that of elderly people or people affected by chronicle diseases, primary care is not particularly developed in Lombardy. Although the last document of regional health planning (Regione Lombardia 2007-2009) has tried to emphasize the role of GP - pushing toward forms of associations on the basis of English Primary Care Groups - only 28% of GPs subscribe to any form of association with colleagues (IReR, 2010). Evidence on this topic is scarce: some information on primary care setting could be found in IReR, 2008, Heller and Tedeschi (2004), Galli and Vendramini (2008). Comparative studies at interregional level are furnished by Ceccarelli et al., 2009, and AGENAS, 2009.

Figure 3: number of general practitioner over 1,000 residents – year 2007



Source: Ministry of Health

Figure 4: number of paediatricians over 1,000 residents – year 2007



Source: Ministry of Health

4.5. Pros and cons of the Lombardy health care system

The analysis of data reported in this section, as well as the evidence examined, enables some considerations about the main merits and criticisms of the Lombardy health care system. About the former, the control of health care expenditure - either per capita and GDP's percentage values - and the positive balancing, represent the visible result of a decade of health care policies structured on this purpose. This objective has been reached without deteriorating the quality and appropriateness of health care. The high rate of active mobility from other regions - about 10% and up to 50% in some specialties, such as oncology and cardiology – confirms the attractiveness of the model. Another positive signal is given by the 2007 Report of the National Institute of Statistic (Istat, 2007) on patients' satisfaction about their regional health care system. The classification is based on the percentage of people that scores the system respectively 1-4, 5-6, 7-10. Residents who think that the Lombardy model is scored 1-4 are 11%, compared to an Italian average of 17.2% (standardized rates). Better results are shown for Aosta Valley (6.2%), Trento, which however represents an autonomous

territorial authority (6.2%), Bolzano, another autonomous territorial authority (7.3%)[13], and Tuscany (10.7 %). Lombard people who score their system 5-6 are 41.2%, while 42% of residents score it 7-10. Notwithstanding the limits of this kind of surveys, this can be considered an additional indication on "above of average" quality of the system.
On the other hand, limits can be divided into two categories. The first one referring to problems structural to the QM setting and the second one highlighting problems peculiar to the Lombardy health care system, and therefore more susceptible of improvements. About the QM structure, the main contradiction is that of promoting free choice in a context characterized by incomplete and asymmetric information. Despite a wide range of services supplied, often consumers can't choose rationally, because they are not fully informed, and even if information is available, some of them are not able to accede to it. Other criticisms relate to the distortions that the application of fee for service system could encounter with a supply provided by both public and private agents. To this extent, risks are twofold: first, if the market is open to private providers, they would probably concentrate their activity in those areas where financial risk is minor. Lombardy is not free from this behaviour: table 10 shows a percentage of private beds in acute care of 18% versus a value of 45% in the long term care. Even for what is concerning acute care, the financial risk could be shifted toward the public sector: Micossi (2008) reports evidence on patients' mobility toward public hospitals after post admission complications. The second point corroborates these considerations and tackles the danger of cream skimming and cherry picking by the private sector. A recent study on this issue shows a major cream skimming activity by private hospitals (Berta et al., 2010).

Switching to the limits not directly related to the QM orientation, the conflict of competency among the Region and LHUs is still very debated, particularly because it let unsolved the problem of the scarce rigour in planning volumes and typology of admission by public hospitals and the discontinuous use of ex post funding to balance their deficits. The relatively high rate of private (out of pocket) financing of health care, is another worrisome issue, which requires a more close examination. Possible improvements are auspicated in the field of territorial care, especially for the services designated to the elderly and/or chronic patients, in order to change the still hospital oriented approach of the Lombardy model. The last issue focuses on the necessity of valuing the general practitioner in its fundamental role of addressing the patient in its medical pathway. To this extent, the development of forms of associative care could drive to improvements both in cost control and health care appropriateness.

[13] To give some parameters, autonomous territorial authorities of Bolzano and Trento have a population of respectively 503,000 and 525,000. Aosta Valley population is about 127,000, versus Lombardy population of about 9,500,000.

5. CONCLUSIONS

This paper represents one of the few attempts to describe and analyse the Lombardy health care model as it emerges in its three different declinations: institutional, theoretical and applied. Since its formulation, a considerable amount of literature has been produced on the Lombardy model and on its quasi market orientation, on the division of roles between Region, LHUs and providers, on the competition between private and public sectors, and on the LHUs' purchaser function. Many authors agree on the definition and analysis of the characteristics of the Lombardy health care system, as well as on the identification of its limits. The quasi market choice, formulated with the regional law 31/1997 embodies the regional Government response to a sequence of national reforms carried on during the nineteen's in the health care field. Competition in the health care sector has driven to a good quality of services and health care balance, together with a sharper presence of private sector within health care services. To this extent, two kinds of considerations need to be stressed. The first one, referred to inpatient care, concerns the financial risk share between public and private sector, in a framework of prospective payment regulated by fixed tariffs. The prominent presence of private providers in the long-term care suggests that risky areas could have been delegated to public providers, letting private sector to specialise within those areas where the risk of complications is low and there is boundary for profits. On this issue, more investigation is needed. The second point is related to the strict control of health care expenditure performed by the Region. Equity issues could arise when observing a gradual shift of public financing toward private (out of pocket) spending.

Though, Lombardy should be given the merit for being the first, and, to a certain extent, the only Region to accept and apply the national decrees 502/92 and 517/93, by creating a model which encourages competition among providers, promotes patient free choice and supports the principle of subsidiarity. With respect to the targets, and notwithstanding the above mentioned limitations, the model has been able to maintain a certain degree of coherency, as can be observed by analysing the general guidelines of the most recent Regional Health Plan (Regione Lombardia, 2007-2009). As mentioned, there is clearly room for improvement in various areas, where further investigation, both theoretical and empirical, is recommended.

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