Ospedalità Privata

Health & Hospitals in Italy



This Report has been edited by **Nadio Delai**, in collaboration with Ermeneia - Studi & Strategie di Sistema in Rome and AIOP - Italian Association of Private Hospitals. To this end, a technical work group has been established made up of Angelo Cassoni, Filippo Leonardi, Annagiulia Caiazza, Alberta Sciachì, Stefano Turchi, Fabiana Rinaldi, Peppino Biamonte, and Nadio Delai (Ermeneia).

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Health&Hospitals in Italy

16th ANNUAL REPORT 2018

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Italian Association of Private Hospitals

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Contents

No	ote	page	7
Pr	esentation		
by	Barbara Cittadini, National President of AIOP	»	9
	Part One THE UNDERLYING VALUE OF THE SYSTEM, INCLUDING SOME CRITICAL AREAS THAT NEED OVERSIGHT		
1.	Average service offerings and the signs of strain as		
	viewed by citizens	>>	25
	1.1. A system seeking to ensure the best possible ser-		
	vices	>>	25
	1.2. The tendency of the indicators of the services pro-		
	vided to increase	>>	31
	1.3. A good result also in terms of effectiveness of care 1.4. Overall a positive user assessment, albeit slightly de-	»	41
	creasing over time	>>	48
	1.5. A stable Resource/GDP ratio that shows a phenom-		
	enon of underfunding compared to other countries	>>	52
2.	The "funnel" of the waiting lists	>>	59
	2.1. A phenomenon of large numbers of a medium-long		
	waits	>>	59
	2.2. A critical evaluation by one in three people	>>	64
3.	A second "funnel" in the form of Emergency Room		
	services	>>	67
	3.1. Access (even multiple) involving almost one in three		
	adult citizens	>>	67

3.2. An opinion of dissatisfaction expressed by one person in four	*****	72
	page	12
3.3. The presence of difficulties related to distance and organization of the service		77
4. A measurement of the efficiency of the system	>>	/ /
through an examination of the Financial Statements		
of the Hospital Centers	>>	85
4.1. Monitoring of the "anomalies" that suggest possible	"	0.5
implicit financial statement covering	>>	85
4.2. An estimate of the impact of inefficiencies on the ex-	"	63
penditure of public hospital facilities		104
penditure of public hospital facilities	»	104
Part Two		
STATISTICAL INDICATORS		
1. Facility data	»	111
1.1. Number of public and accredited private medical in-		
stitutions	>>	111
1.2. Bed distribution	>>	112
1.3. Medical equipment	>>	114
2. Activity data	>>	127
2.1. In-hospital days and patient bed occupancy rate	>>	127
2.2. Types of admissions and discharges	>>	128
2.3. Prevalent DRGs	>>	129
2.4. Activities classified according to major diagnostic		
categories	>>	129
2.5. Activities classified according to specialty	>>	130
2.6. Patient mobility	>>	131
3. Staff information	>>	162
3.1. Staff fluctuation over the years	>>	162
3.2. Staff distribution throughout Italy	>>	163
4. Spending data	>>	168
4.1. Economic flow trends over the years	>>	168
4.2. Health expenditure comparisons	»	169
APPENDICES		
1. Methods applied	>>	177
2. The complete list of contents of the 2018 Report	>>	215

Note

This text is an abstract of the Report on *Ospedali & Salute*, the 16th edition of which was presented to the Senate of the Republic – Cloister of the Convent of Santa Maria Sopra Minerva – Capitolare Room on January 16th 2019.

The primary objective of AIOP (Italian Association of Private Hospitals) is to contribute to improving knowledge of the Italian health system at an international level, by providing European institutions, professionals and scholars with data and assessments which in some cases also relate to 2018.

Following the introduction written by the President of AIOP, Mrs. Barbara Cittadini, Part One of the abstract highlights major health issues which have emerged in the last year, and analyzes supply and demand issues, focusing in particular on the quality of services and on citizens' opinions, as expressed in a special survey.

Part Two provides a set of indicators regarding equipment, information on hospital activities and expenses, as well as a complete sample of data for the Italian hospital system as a whole.

Finally, details of the method used to conduct the survey of Italian families and a complete list of the contents of the 16th Report are also provided.

Presentation

by Barbara Cittadini, National President of AIOP

On December 23rd, 2018, the National Health Service turned 40 years old. This anniversary does not have a merely symbolic value, but should stand as a reminder to all of the civilization decision that Italy made in 1978 and that, still today, is a priceless asset to be upheld and preserved. It was a decision that rendered the principle of universal and inclusive health care factual and real: not only a factor of enlightened progress and culture, but also something that not all countries have and which, therefore, sets Italy apart in a positive manner.

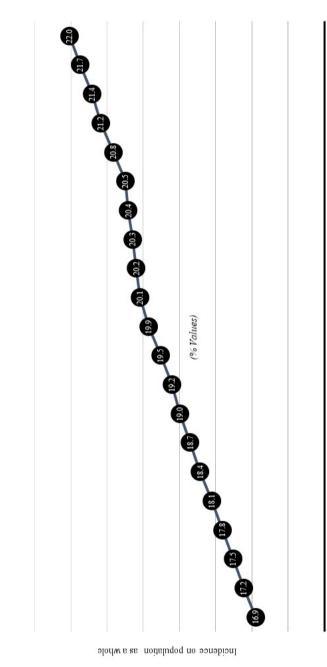
Over these four decades, many realities have changed profoundly and radically, as have our needs, our way of producing wealth and well-being, and some of our societal weaknesses have also increased (the aging population, and general and specific living conditions) – see Figure 1 – in relation, above all, to the financial crisis that strongly destabilized our country.

For a significant part of these four decades, AIOP offered Italians an annual opportunity to reflect on the progress of the Italian hospital system. This occurrence should be a source of pride and satisfaction for us.

In fact, since 2003, AIOP has prepared a Report, that is now in its 16th edition, and whose publication has become a regular event.

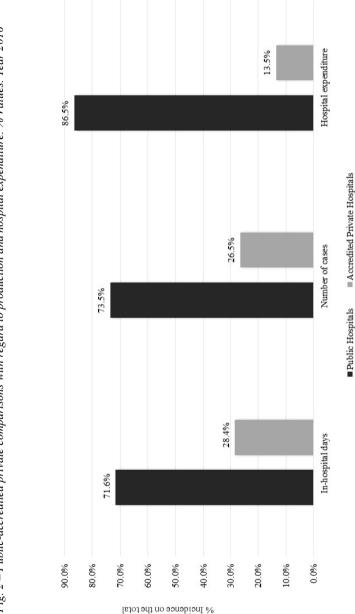
It is important to note the three reasons that inspired this initiative:

- adopting a dual-perspective method of evaluation: first of all, one devoted to citizens and users, which should represent the reference target of the NHS, and one reserved for the hospital "machine" and the relative need for its evolution/transformation;
- reaffirming the principle that the NHS has a component governed by public law and one by private law, as required by law, and that the component governed by private law plays an important role in the system: the numbers tell us that the accredited private component provides the system with 28.4% of in-hospital stays and 26.5% of the services produced, with a total impact on public hospital spending of 13.5% (see Figure 2);



Source: ISTAT – Demographic statistics. Years 1996-2016

10



Source: processing by AIOP on data SDO from Ministry of Health and Agenas

 the decision to make an instrument (the Report, in fact) available to allow Italians to gain familiarity and understanding of their NHS, beginning with an overview of the existing hospital facilities carried out and prepared impartially by a third party, *Ermeneia* – Studi & Strategie di Sistema.

Following the changes to the NHS each year, and focusing attention on the hospital system, is an important undertaking and in fact also entails taking note of the difficulties and critical issues that exist: problems that those responsible for health care planning must analyze, study and manage.

The presentation of the 2018 Report is, therefore, also an opportunity to detect critical issues inherent to the NHS, as well as solutions that may see them resolved.

First of all, the NHS, as a whole, has – for too long – reported a tendency towards constant and worsening underfinancing in relation to the Gross Domestic Product (see Figures 3 and 4).

Presently, the financial commitment stands at 6.6% of GDP: this puts the ability to guarantee adequate services, consistent with scientific progress and with the needs of the population, at risk.

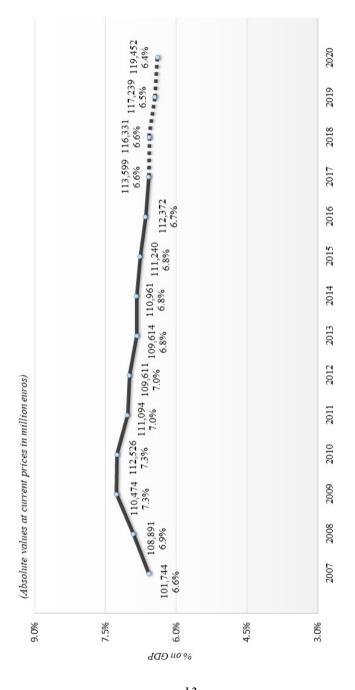
Care must be taken in this regard. We are facing a two-fold decrease: the GDP has decreased, as has the share of financial commitment to the NHS.

It is clear that this is not the NHS that was envisaged by the Legislators, the one the country needs and its citizens need. It is also true that, despite the "symptoms" of a system that fails to completely respond to the citizens, there are also shining examples that indicate some levels of excellence in many areas of this system.

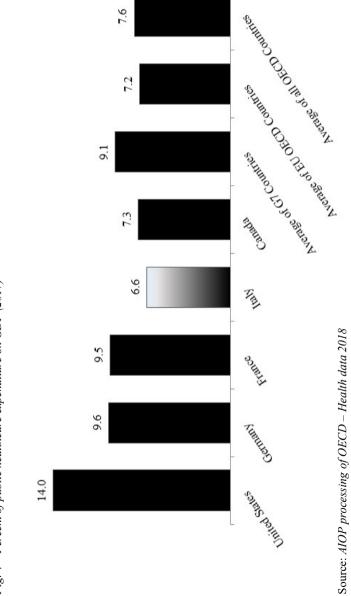
In addition to the low level of funding allocated to the NHS out of the GDP, it should also be noted that health care policies that do not allow for investment in innovation to ensure development in the sector have been adopted, and that these are indispensable prerequisites for our System to maintain its characteristic levels of quality.

Secondly, the progressive deterioration of the services provided by the public component must be considered, which often show quantitative reductions and qualitative weakening of the services; phenomena that bring about not only inconveniences to patients and their families but also postponements or the forgoing of treatment, as well as the ever increasing out-of-pocket expenses or recourse to health mobility by accessing health care services outside of the home Region.

In this regard it is necessary to point out that the restoration of the freedom of choice of place of care for all illnesses and for all regions also means triggering a virtuous mechanism that, combined with a real, general application



Source: Ministry of Economy and Finance, Economic and Financial Document (Analysis and Trends of Public Finance, Years 2011-2018); Update Note to the DEF (Economic and Financial Document). September 2018



14

of payment for service in the financing of all public and private providers, may encourage investment, virtuous competition, and the development of excellent centers and networks, contributing decisively to keep the whole NHS in line with the best European health and welfare systems.

Extremely useful to gaining a better understanding of what is happening is the evaluation recently carried out by ISTAT, which is confirmed by the data in Part Three of this Report: the forgoing of visits or specialist exams due to lengthy waiting list affects about 2 million people, while there are over 4 million people who forgo them for financial reasons.

Thirdly, we cannot fail to report the obvious differences among the services offered in the territories and within them, in which, at the same time, weaknesses and excellences coexist, though these are not always easy to see if we look only at the average statistical values.

The most evident synthesis of these critical issues is the emergence of increasingly serious and unacceptable social inequalities, which translate into obvious phenomena and that this year the Report, faithful to its original purpose mentioned above, has examined starting with two symptoms of "tension" experienced by citizens and users.

The first is that of waiting lists, a phenomenon that has during the last twelve months affected almost 4 out of 10 adults one or more times.

With respect to this critical situation, the need to increase the supply of services provided to overcome the problem of waiting lists is becoming inevitable, allowing citizens to avail themselves of the freedom of choosing the place of care and implementing provision of the new essential levels of care (LEA).

The government must be aware that the ceiling imposed by Legislative Decree 95 in 2012 must be removed, also to allow the renewal of national contracts for those workers operating in the private law component of the NHS, to ensure a service that meets the expectations of a modern and civilized country.

The second is represented by accesses to the Emergency Room, which affected almost 1/3 of the adult population. These are two key experiences, which can generate serious problems to the stability of the system, causing anxiety, fatigue, dissatisfaction and adaptive behavior (such as that of using the Emergency Room as an alternative solution).

Our Report identifies and analyzes both phenomena through three specific surveys undertaken on a sample of the population as a whole, on a subsample that has actually had one or more experiences with waiting lists and/or the Emergency Room, and on a specific sample of caregivers, respectively.

The 2018 Report has, however, taken into consideration the supply system analyzed under two profiles: that of the indicators relating to the services provided which show – and not as of today – an average improvement in spite of everything, despite all the internal differences to the territories mentioned above, and of the monitoring of the efficiency of the public Hospital Centers, by means of examination and making a multi-year comparison of the consistency between the items on the Hospital Centers' Financial Statements.

The conclusions of the assessment performed can only bring attention to the inspiring principles of the National Health Service. These are principles that our Association has always shared: universal and inclusive care, and the presence of a mixed public-private system that has made our health service a reference model for many countries.

The NHS is a precious resource for the country that is at risk of being lost. It is essential that all those who have a systemic responsibility be fully aware: Government, Regions and operators at all levels. There is a need for renewed financial commitment and greater sharing of intent between the private law and the public law components of the NHS, which should work together in a more synergistic way.

Hospital centers governed by private law in the accredited system are aware of the responsibility they have in their role as members of the health service and its significance. We work – public and private – for a common goal, namely that of providing health care in universal, efficient and effective terms.

Indeed, the presence in Italy of a large network of private hospital centers is a significant opportunity for the NHS, a valuable tool to provide quality services, a reserve of operations and flexibility to the entire system. Our health care facilities rely on the professionalism of 12,000 doctors, 26,000 nurses and technicians and over 32,000 social and health workers, using less than 7% of the resources that the National Health Service assigns to hospital activity and with performance indicators that overlap those of public facilities.

But even if all this is taken into account, without the adoption of adequate health policies, the AIOP network alone – as well as all the rest of the other private operators – is not capable of ensuring the universal nature of the services. We can, however, with our ability and our flexibility, contribute to ensuring that the NHS returns to its universal principle.

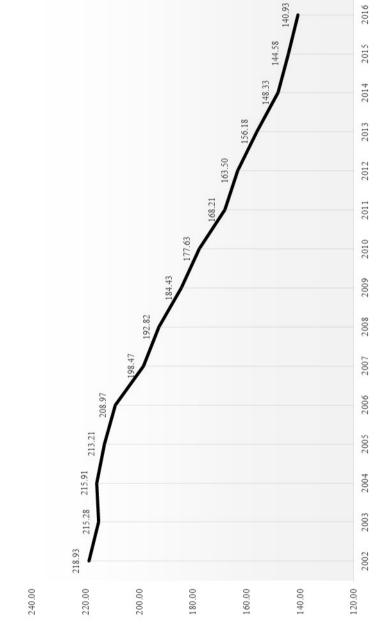
We cannot, however, fail to report the phenomena of tension that exist and which encounter serious difficulties, for example, in the necessary restructuring and reorganization of public hospitals. These have often concentrated on financial management, neglecting the quantity and quality of services offered to citizens, as has happened, in particular, though not only, in the Regions subject to debt rescheduling plans, which have wound up dealing with the containment of expenditures, but not with the requalification of services. In fact, the Regions that, due to extraordinary measures, experienced extensive downsizing of their hospitals (see Figure 5), without taking into account the effects that this choice would have, have been more impoverished from the point of view of health care, and have focused on territorial medical services that have never actually been implemented. All of this has left patients with needs that are not met by the hospital facilities, given that these have been drastically downsized. However, in Regions where, on the other hand, territorial assistance works, it is understood that this performs a noble function which is, however, not comparable to that of hospitals: the two realities are not fungible.

The Regions under debt rescheduling plan and/or external commissioners also witnessed an increase in passive health mobility (see Figure 6), not only because their services suffer from qualitative differences with those of the Regions not under debt rescheduling plan, but because the hospitals, to meet the needs of expenditure rationalization, have been downsized, meaning that citizens who can, go to other Regions for their care needs, or else meet their needs with their own resources or forgo care, with social costs that will burden the country in the medium to long term.

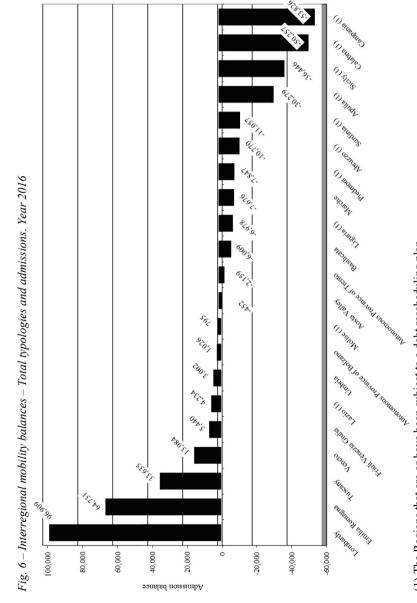
The reality of these facts, which we cannot fail to acknowledge – and that is very well described in the Report – should lead us to re-examine the conditions that inspired the birth of the National Health Service, to preserve them and reinterpret them in a situation that is incontrovertibly, but also physiologically, different from that four decades ago.

In our opinion, the System requires maintenance, which envisages putting in place the responsibilities and financial commitments of both public and accredited private hospitals, and not only because the law prescribes it, but because it is in the objective interest of the Nation to improve on both components and make use of and render efficient their respective potentials.

This is what the population wants when, in almost 9 cases out of 10, it is highlighted how accredited private facilities are part of the hospital system and that the choice of an in-hospital stay does not depend on the legal nature of the hospital facility, but on its capacity to provide an adequate, reliable, serious health care service that is close to the person. This offering is the product of the different capacity, demonstrated by the private component of the NHS, to react and adapt to the reduction of funding sources and the evolution of organizational models. Unlike what has been reported in the public



Source: processing by AIOP - data from the Ministry of Health - SDO Reports. Years 2002-2016



Note: inpatient admissions for acute cases and DH, inpatient rehabilitation and DH, long-stay patients are included. Source: processing by AIOP- data from the Ministry of Health - Interregional Mobility Matrices. Year 2016 (1) The Regions that are or have been subject to a debt rescheduling plan.

sector, we have not concentrated on reducing costs, but on rationalizing them, investing in change, making the offering more efficient, responding to new demands and care settings, and continuing to capitalize on facilities, technologies, innovative drugs and professional training.

These solutions, which made it possible to meet the expectations of citizens and thus also contribute to better performance by the NHS, were obviously made possible by the flexibility that characterizes this component of the hospital network and, are thus a direct consequence of the pluralism that thus represents a value for the whole country.

Thus, these are solutions that, from the accredited facilities, could – and indeed should – be extended to public facilities, so as to contribute to increasing the efficiency of the whole system, by transferring indicators of quality and attractiveness that, in time, become the common practice and shared standard for all operators.

In other words, enhancing both components would make it possible to improve the overall system level, adopting solutions that truly include equal treatment, equal evaluation of results, and equal operational transparency.

So, the framework described in the 2018 Report poses a single challenge to everyone, one that consists in tackling a demand for health care that is increasingly quantitative and diverse in its quality. This is a situation that must give responsibility to the duty not only of preserving our NHS, but also of creating the conditions for this to really continue to ensure an efficient, effective, timely and quality offering.

If we were to come to the bitter awareness that, in these 40 years, the contextual conditions have changed so greatly that they no longer permit the country to continue to guarantee this extraordinary achievement, because it has an unsustainable cost then, there is an obligation not only politically, but also ethically, to work without further delay and hesitation on a structural system reform, with all the effects that this will have on Italians, not only regarding health care, but socially and psychologically as well.

Deciding not to make a decision is the worst condemnation that can be inflicted on a country that is already witnessing serious, evident and eloquent symptoms of a system that, whether inevitably, efficiently or radically, needs to be reformed on the basis of a different model.

Finally, before thinking of structural changes, which require time, in the immediate future we might think about making the System more efficient by promoting some sectors and/or services that are most needed, based on epidemiological data. And for this reason, with the aim of creating real long-term efficiency for the System, AIOP proposes:

1) returning to the corporatization path which has never been completed, with the return to service fees for the public sector, which must make use

- of effective business plans to bring the balance between costs and revenues back in line within certain definite time limits:
- 2) activation of a real "rewards and punishments" system that rewards the efforts of the better organizations and managers, and at the same time clearly penalizes dysfunctional or ineffective management;
- increasing the amount of virtuous competition, opening up to real equality between providers with different legal status using a single accreditation method;
- 4) providing for third party controls to overcome the conflict of interests of a public service provider that is both a controller and a controlled entity.

The future is a choice and not a destiny. Hopefully, for once, the country will decide to make a choice. In fact, ignoring today's problems means wasting the opportunity to be able to manage them.

As always, AIOP is willing to undertake a virtuous and synergistic discussion with health care planners, in order to identify the best possible solution taking into account the necessary resources, but also those available and, above all, the many and relevant context changes that have taken place over the past forty years. A solution that – we all agree – must have as its objective a right that, even today, is protected by our Constitution: health care.

Part One

The underlying value of the system, including some critical areas that need oversight

1. Average service offerings and the signs of strain as viewed by citizens

1.1. A system seeking to ensure the best possible services

It is by now widely known that our National Health Service highlights its average performance levels in such a manner that helps it to attain a good position compared to other national health systems. The fact remains that there are weaknesses, territorial differences and diversity of services to be found among similar institutions located in the same territory alongside of nationally and internationally recognized areas of excellence.

All this has occurred amidst a process of decreasing financial and, for some years now, also professional resources (due to the retirement of operators), creating the risk of impoverishing the system and, above all, of causing differentiation within it, leading to non-homogeneous conditions for the provision of services for patients, the level of access to treatment and the quality of the same in the various territories of the country and sometimes even within the same territory.

The hospital environment in particular – and it should always be remembered – is configured as a mixed public/accredited private system that makes up the total offering at the disposal of Italian citizens. The accredited private component certainly cannot be defined as marginal if we consider that it provides 28.4% of in-hospital stays and accounts for 13.6% of the total public hospital expenditure.

However, accredited private hospitals make up a complex variety of facilities operating within this category.

First of all, its public facilities include hospital centers, hospitals directly managed by local health authorities (ASL Azienda Sanitaria Locale), and hospital centers integrated with universities; the whole of which accounts for the greater part of current state hospital expenditures (about 76%). In addition to these are other facilities, namely public university polyclinics that are

not affiliated with hospitals, public Institutes for Treatment and Research (IRCCS) and Public Foundations, USL Facilities and Research agencies, which together account for another 10% of current public hospital expenditures.

The above facilities are augmented by accredited healthcare facilities, private university polyclinics, private IRCCS and religiously-affiliated classified hospitals. These make up the remaining 14% of the current National Health System hospital expenditures.

In 2016 (latest available data), there were a total of 192,992 patient beds, 69.8% (134,686 units) of which were located in public hospitals and 30.2% (58,306 units) of which were located in accredited private hospitals (fig. 1). Comparing the two groups of patient beds provides an understanding of how the system effectively embodies all the features of a mixed organization that is predominantly public but also has a quite large private component, as was recognized by Legislative Decree 502/1992.

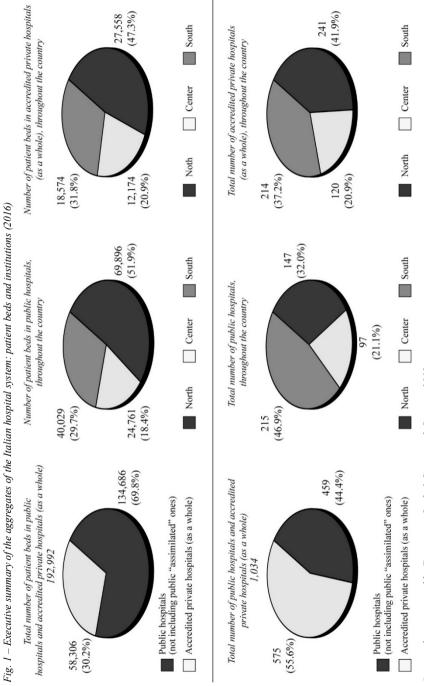
Public and accredited private hospital facilities total 1,034 (2016), with the latter being greater in number (55.6%) than the former (44.4%). Public hospitals are slightly more concentrated in the Center-North (53.1%), while accredited private hospitals are found more in the Center-South (58.1%), as shown in the second part of Figure 1.

But the comparison between the number of hospitals and the number of patient beds (again in 2016) leads to more detailed information as shown in the chart below, with the average number of patient beds in public hospitals decreasing from North Italy (475), to Central Italy (255), and finally in South Italy (186). This phenomenon is also true for accredited private hospitals, which however have a lower average number of patient beds that that of public hospitals.

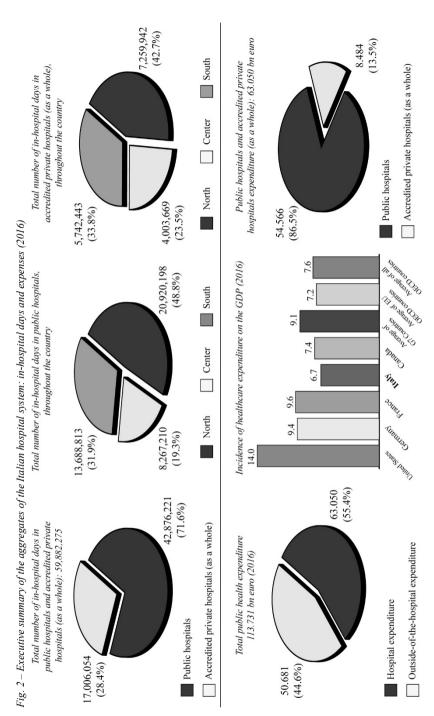
		Public hos	pitals	Accr	edited privat	e hospitals
Geographical	No. of	No. of	Patient beds	No. of	No. of	Patient beds
distributions	hospitals	patient	No. of	hospitals	patient	No. of
		beds	hospitals		beds	hospitals
North	147	69,896	475	241	27,558	114
Center	97	24,761	255	120	12,174	101
South	215	40,029	186	214	18,574	87
Total	459	134,686	293	575	58,306	101

Figure 2 depicts aspects relating to in-hospital stay flows and spending flows for the year 2016 (latest available data).

In-hospital days were 59.9 million for the year 2016 compared to 61.2 in 2015, 61.8 in 2014, 62.9 in 2013, 65.2 in 2012, and 67.9 in 2011: which represents an overall decrease of 11.8% over the period from 2011 to 2016.



Source: data processed by Ermeneia - Studi & Strategie di Sistema, 2018



Source: data processed by Ermeneia – Studi & Strategie di Sistema, 2018

Again, in 2016 71.6% of these days were in public hospitals and the remaining 28.4% were in accredited private hospitals as a whole.

The geographical distribution of in-hospital days, based on the type of facility, is the following:

C 1: 1		No. of in-	hospital da	ys in public	hospitals	
Geographical distributions		In millions			% Val	
aistributions	2014	2015	2016	2014	2015	2016
North	23.2	22.5	20.9	52.3	51.4	48.8
Center	8.0	8.2	8.3	18.0	18.7	19.3
South	13.2	13.1	13.7	29.7	29.9	31.9
Total	44.4	43.8	42.9	100.0	100.0	100.0
C 1: 1	No.	of in-hospi	tal days in a	accredited p	rivate hospi	itals
Geographical distributions		In millions			% Val	
aistributions	2014	2015	2016	2014	2015	2016
North	8.1	8.3	7.3	46.6	47.7	42.7
Center	4.0	4.0	4.0	22.9	23.0	23.5
South	5.3	5.1	5.7	30.5	29.3	33.8
Total	17.4	17.4	17.0	100.0	100.0	100.0

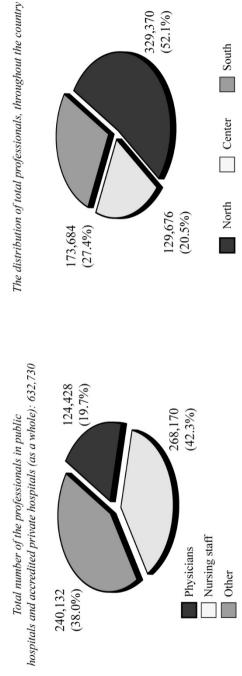
As we can see over the last three years, the in-hospital stays in the North have tended to decrease, while they are increasing in Central and South Italy.

If we look instead to the flow of resources (see the second part of Figure

- 2) it is possible to advance the following considerations:
- a) the division of total public health expenditure (113.731 billion euros in 2016) proves as usual to be more focused on the hospital component (55.4%) than outside the hospital (44.6%). The incidence of public health expenditure on the total (based on estimates) would thus be greater in 2016 compared to the past, given that it was 54.5% in 2011, 54.3% in 2012, down to 54.2% in 2013, then returning to 54.3% in 2014, and finally arriving at 55.4% in 2016;
- b) the percent of public health expenditure to the national GDP places Italy in the lowest position (6.7% in 2016) compared to the average of the G7 countries (9.1%), the average of European OECD countries (7.2%) and the total of OECD countries (7.6%). But we should also mention that our country remains 2.7 points below the incidence of public health spending to GDP in Germany and 2.9 points that of France. It should also be noted that, compared to the previous year, Italy still remains at 6.7% of GDP compared to 6.8% in the four-year period 2011-2014, with a decrease from the 7.2% in 2010. And all this happened in the presence of a simultaneous drop in GDP during the crisis period, until 2013.

This shows how Italy invests much less public resources than the other partners in the OECD area (both by percentage and in absolute terms,

Fig. 3 – Summary of the aggregates of the Italian hospital system: total employees (2013)



Source: data processed by Ermeneia - Studi & Strategie di Sistema, 2018

- according to the level of GDP), yet retaining a universal and inclusive system albeit one in progressive deterioration;
- c) the total public hospital expenditure (63.050 billion euros in 2016) breaks down to 86.5% for public institutions and 13.5% for the accredited private sector as a whole: these shares were 14.4% in 2011, down to 13.6% in 2013, and they increased to 13.8% in 2014, and subsequently reduced to 13.6% in 2015, and then to 13.5% in 2016, with a declining trend in the accredited component compared to the public component. It should be added that if private hospitals (accredited healthcare facilities) are taken into consideration, the relative expenditure out of the total public hospital expenditure has in turn continuously decreased: it went from 7.3% in 2010-2011 to 7.2 % in 2012, to 7.0% in 2013 and 2014, and to 6.9% in 2015 and 2016.

It is worth recalling, starting from this last observation, that if we compare the incidence of spending on accredited private facilities as a whole, equal to 13.5% of the total public hospital expenditure in 2016, with the incidence of in-hospital stays out of the total provided in the same year (28.4%), we can only observe a situation in which the overall accredited component of the current mixed hospital system plays a more than significant role: in fact it offers, proportionally, double the amount of in-hospital stays with less than half of the related expenses accounted for, due obviously to more efficient management (and with decreasing costs for the State over time).

Finally, Figure 3 provides an overall idea of all the human resources that conduct their activities within the mixed hospital system. In 2013 there were 632,730 units (latest available data), showing a -2.1% reduction compared to the year 2010. Of this, 19.7% is made up of physicians (124,428 units), 42.3% is made up of nursing staff (268,170 units) and finally, 38.0% comprises the remaining personnel (240,132 units).

The distribution of personnel throughout the country shows the weight of hospital activities in the Central-North, corresponding to 72.6% of professional resources employed (52.1% in the North + 20.5% in Central Italy), to which the South is added with 27.4% of the total.

1.2. The tendency of the indicators of the services provided to increase

It has been mentioned how the National Health Service is characterized by average performance levels that help it to maintain a good position compared to other national health systems. And this is true despite the differences in facilities and territories as was described in the previous section. Public hospitals and accredited private hospitals are thus able to provide services that are of a good standard, although with differences depending on whether these facilities are in the North, Center, or South of Italy, or are represented by different hospitals within the individual Regions.

To measure the average performance levels of hospital services, two fundamental indicators can be used, and have been calculated for this Report: that of *average weight* and that of *case-mix*.

If we consider the average weight¹ we can compare the services of public institutions to those of AIOP accredited private hospitals, which shows that (Table 1):

- a) the national average indicator of public institutions and accredited private hospitals steadily increased over the period from 2013 onwards: for public institutions it went from 1.19 in 2013 to 1.23 in 2016 and for the latter group from 1.29 to 1.35 in the same period. But we must also add that, since 2017 data is available for AIOP accredited private hospitals, there was a net recovery of the average weight indicator, that went from 1.35 in 2016 to 1.36 in 2017;
- b) it should also be noted that the indicator appears to get better, year by year, when it refers to AIOP accredited healthcare facilities compared to public hospitals (with an acceleration since 2015 onwards). This confirms that the highest level of complexity does not necessarily belong to public hospitals, since there are also accredited private facilities equally or even qualitatively speaking more sophisticated than the public ones;

Average weight =
$$\frac{\left[\sum_{g=1}^{579} \left(a_g N_{gh}\right)\right]}{\sum_{g=1}^{579} N_{gh}}$$

where: a_g = specific relative weight of each DRG;

N_{gh} = number of discharged patients for the DRG in a single healthcare facility or in a group of facilities.

¹ The *average weight* is a synthetic indicator of the level of complexity of the illnesses (cases) treated. It is an average of the relative weights assigned to each group of patients (DRG), weighted with the corresponding discharge numbers. The calculation formula used is the following:

Table 1 - The quality of services measured by average weight. 2013-2017

		Public in	Public institutions		AIOF	Private hospii	AIOP Private hospitals (accredited healthcare facilities)	healthcare faci	lities)
Kegions	2013	2014	2015	2016	2013	2014	2015	2016	2017
Piedmont	1.29	1.29	1.30	1.30	1.58	1.61	1.65	1.64	1.70
Lombardy	1.18	1.19	1.21	1.21	1.47	1.49	1.55	1.55	1.59
- A.P. of Bolzano	1.09	1.09	1.10	1.12	98.0	0.80	0.78	0.78	0.82
- A.P. of Trento	1.19	1.18	1.19	1.19	0.99	0.97	0.97	1.02	1.09
- Veneto ^(a)	1.21	1.23	1.26	1.28	1.35	1.37	1.42	1.44	1.45
 Friuli Venezia Giulia 	1.23	1.25	1.26	1.26	1.21	1.26	1.30	1.27	1.28
- Liguria	1.25	1.26	1.27	1.27	2.60	2.64	2.80	2.82	2.87
 Emilia Romagna 	1.21	1.22	1.22	1.23	1.34	1.33	1.34	1.36	1.36
- Tuscany	1.30	1.31	1.34	1.35	1.56	1.59	1.69	1.71	1.71
- Umbria	1.19	1.20	1.21	1.24	1.18	1.30	1.43	1.61	1.63
Marche	1.24	1.24	1.24	1.26	1.26	1.26	1.30	1.28	1.23
- Lazio	1.21	1.22	1.23	1.26	1.10	1.11	1.19	1.32	1.30
- Abruzzo	1.14	1.15	1.18	1.21	1.29	1.28	1.29	1.31	1.32
- Molise	1.03	1.04	1.05	1.10	1.13	1.32	1.19	1.47	1.46
- Campania	1.17	1.17	1.18	1.19	1.04	1.02	1.05	1.07	1.13
- Apulia	1.06	1.08	1.09	1.11	1.54	1.44	1.50	1.50	1.45
- Basilicata	1.22	1.20	1.22	1.23	•				
- Calabria	1.05	1.07	1.09	1.12	1.31	1.26	1.42	1.44	1.51
- Sicily	1.15	1.15	1.16	1.18	1.20	1.16	1.12	1.19	1.05
- Sardinia	1.09	1.11	1.13	1.14	0.85	98.0	0.88	1.19	1.24
Italy	I.19	1.20	1.21	1.23	1.29	1.28	1.32	1.35	1.36
dicator values are ali	d to CMS DRO	DRG version 24.0	.0 used by the Ministr	inistry of Healt	y of Health since 2009. This version consists of	This version con		f 538 DRGs and refers to the 200'	o the 2007

ı International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) for the classification of diseases, injuries, surgeries, diagnostic and therapeutic procedures.

(a) The public institutions in Veneto also include 4 private hospitals (accredited healthcare facilities) associated with AIOP and under the control of USL facilities. (b) The high average weight is due to the presence of two accredited healthcare facilities, largely devoted to extremely specialized treatment. Source: data processed by Ermeneia – Studi & Strategie di Sistema based on the Ministry of Health and AIOP data

- c) then, if we look at the 2016 indicators Region by Region, we can see that the entities that manage to find a place in the public sector above the national average (*Average weight*: 1.23) are, in descending order:
 - Tuscany (1.35);
 - Piedmont (1.30);
 - Veneto (1.28);
 - Liguria (1.27);
 - Friuli Venezia Giulia, Marche, and Lazio (1,26);
 - and Umbria (1.24).

We can also see that the *Average weight* indicators of all the southern regions are quite different from the national average of 1.23, except Basilicata (perfectly in line with the average of 1.23) and Abruzzo (1.21). Likewise, the *Average weight* index exceeds the national average of 1.35 in 2016, for accredited hospitals in the following regions, again in descending order:

- Liguria (2.82);
- Tuscany (1.71);
- Piedmont (1.64);
- Umbria (1.61);
- Lombardy (1.55);
- Apulia (1.50);
- Molise (1.47);
- Veneto, but even Calabria (1.44);
- and Emilia Romagna (1.36).

So in 10 Regions the national average of the *Average weight* indicator is exceeded by accredited facilities and in 8 Regions by the public facilities. And in as many as 5 regions (Piedmont, Veneto, Liguria, Tuscany and Umbria) the relevant national average is exceeded both in public facilities and accredited ones: confirming the fact that a good territorial setting is capable of generating more overall quality in both types of facilities. Finally, in 2016 the *Average weight* indicator is generally lower in southern regions both in public (except Basilicata) and in accredited private sectors (with the exception of Molise, Apulia and Calabria);

- d) furthermore, in almost all regions the *Average weight* indicator for the year 2016 is higher for accredited private hospitals than for public hospitals, except in the case of the two autonomous provinces of Trento and Bolzano (where the private sector is, however, marginal), as well as in Molise:
- e) and finally, regarding AIOP accredited private hospitals, it can also be added that in 2017 the *Average weight* value increased further to 1.36

compared to 1.35 for 2016. And this applies to almost all the Central-Northern Regions, except for Emilia-Romagna and Tuscany, which maintained a value identical to that of the previous year, while there was a decrease for the Marche and Lazio Regions. In the South of Italy, the *Average weight* value increased slightly for Abruzzo (1.32 compared to 1.31), and for Campania (1.13 compared to 1.07), and decreased slightly for Molise and Apulia.

At this point, the level of complexity of services can also be measured by the second type of indicator – as previously mentioned – that of the so-called $Case\ mix^2$. The values in Table 2 permit the following considerations to be made:

- a) both types of facilities have witnessed stabilization of this indicator value: the indicator remained at 0.98 in 2016 and had been the same over the previous three years for public institutions, whereas for AIOP accredited private hospitals, after an increase in 2013 (1.07) and in 2015 (1.09), it dropped slightly in the last year to 1.08;
- b) the national case-mix indicator for accredited private hospitals appears permanently higher than that of the public institutions in all cases, as can be seen by comparing the data of the last line in Table 2;
- c) the regional health authorities that exceed the national average (0.98 in 2016) with respect to public institutions are (in descending order):

² The case-mix index constitutes a second synthetic (more detailed) indicator of the complexity level of illnesses treated. It expresses the complexity of the cases treated by a department, a hospital or a unit, compared to the complexity of the case for the entire regional or national hospital system. Case mix levels greater than 1 are associated with a complexity higher than the average for the system in question. The calculation formula used is the following:

$$\text{Case-mix index} = \frac{\left[\sum_{g=1}^{579} \left(a_{g} N_{gh}\right)\right] : \sum_{g=1}^{579} N_{gh}}{\left[\sum_{g=1}^{579} \left(a_{g} N_{gr}\right)\right] : \sum_{g=1}^{579} N_{gr}}$$

where: ag = specific relative weight of each DRG;

Ngh = number of discharged patients for the DRG in a single healthcare facility or in a group of facilities;

Ngr = number of discharged patients for the DRG for the system in question (e.g. regional, national total).

Please note that the case-mix index is weighted with the complexity of cases of the entire regional hospital system, whereas the average weight index is weighted only with the number of discharges: consequently, the average weight index ends up reducing the variable scope of the indicator itself which must take account of the context.

- Tuscany (1.08);
- Piedmont (1.04);
- Veneto and Liguria (1.02);
- Friuli Venezia Giulia (1.01);
- Marche and Lazio (1.00);
- and Umbria (0.99).

The same process, applied to AIOP accredited private hospitals (again for the year 2016) sees an average national case-mix of 1.08, while the regions that exceed this value are, in descending order:

- Liguria (2.25);
- Tuscany (1.36);
- Piedmont (1.31);
- Umbria (1.29):
- Lombardy (1.24);
- Apulia (1.19);
- Molise (1.18);
- Veneto and Calabria (1.15);
- and Emilia Romagna (1.09);
- d) a *case-mix* index higher than the national average is mostly found in the Central-Northern regions compared to those in South Italy for public institutions. This also applies to accredited private hospitals, which however have an indicator higher than the national average even in three regions of the South (Molise, Apulia and Calabria);
- e) and finally, for the year 2016, the comparison between the case-mix index of public institutions and that of AIOP accredited private institutions almost always shows a better position for AIOP facilities, except in the case of the two Autonomous Provinces of Trento and Bolzano (as previously mentioned, the presence of these entities is however, marginal), and Campania. While for Friuli Venezia Giulia the *case-mix* index is the same (1.01).

In any case, in addition to the indicators mentioned, other indicators can be used to measure the level of complexity of services provided by the different types of hospitals but with reference to some specific services. Table 3 indicates 16 highly specialized DRGs and their incidence per 1,000 discharged patients in the two types of hospital facilities considered. From this comparison the following can be noted:

a) an average incidence that continues to increase for public institutions between 2014 and 2016 (from 22.7 to 26.5%) and a parallel increase for AIOP accredited private hospitals between 2014 and 2015 (from 28.1 to 30.9%), followed by a decrease in 2016 (27.8%);

Table 2 - Comparison of AIOP public institutions and private hospitals (accredited healthcare facilities), based on the "case-mix" of the services provided. 2013-

D. S.		Public institutions	itutions		AIOP Privat	e hospitals (acc	AIOP Private hospitals (accredited healthcare facilities)	re facilities)
Keglons	2013	2014	2015	2016	2013	2014	2015	2016
- Piedmont	1.07	1.05	1.05	1.04	1.31	1.32	1.35	1.31
Lombardy	0.98	86.0	0.97	96.0	1.24	1.24	1.27	1.24
- A.P. of Bolzano	0.90	0.89	0.89	68.0	0.71	0.65	0.64	0.63
- A.P. of Trento	0.99	0.97	96.0	0.95	0.82	0.80	0.79	0.81
- Veneto (a)	1.00	1.00	1.02	1.02	1.12	1.12	1.16	1.15
 Friuli Venezia Giulia 	1.02	1.02	1.02	1.01	1.01	1.04	1.06	1.01
– Liguria (b)	1.03	1.03	1.02	1.02	2.15	2.16	2.30	2.25
 Emilia Romagna 	1.00	1.00	0.99	0.98	1.11	1.09	1.10	1.09
- Tuscany	1.07	1.08	1.08	1.08	1.29	1.30	1.38	1.36
– Umbria	0.99	86.0	0.98	66.0	0.98	1.06	1.17	1.29
- Marche	1.02	1.02	1.00	1.00	1.04	1.03	1.07	1.02
- Lazio	1.00	1.00	1.00	1.00	0.91	0.91	86.0	1.05
- Abruzzo	0.94	0.95	96.0	0.97	1.07	1.05	1.06	1.04
- Molise	0.85	0.85	0.85	0.87	0.93	1.08	86.0	1.18
- Campania	0.97	96.0	0.95	0.95	98.0	0.84	98.0	0.85
– Apulia	0.88	0.89	0.88	68.0	1.27	1.18	1.23	1.19
Basilicata	1.01	66.0	0.99	86.0				
Calabria	0.87	0.88	0.88	68.0	1.09	1.03	1.17	1.15
- Sicily	0.95	0.94	0.94	0.94	1.00	0.95	86.0	96.0
Sardinia	0.90	0.91	0.91	0.91	0.70	0.70	0.72	0.95
Total	0.98	0.98	0.98	0.98	1.07	1.05	I.09	I.08
All indicator values are aligned to CMS DRG version 24.0 used by the Ministry of Health since 2009. This version consists of 538 DRGs and refers to the 2007	to CMS DRG vers	ion 24.0 used by t	he Ministry of	Health since 2009	. This version	sonsists of 538 I	ORGs and refers	to the 2007

nternational Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) for the classification of diseases, injuries, surgeries, diagnostic and All indicator values are augmed to CMS DRG version 24.0 used by the immistry of health since 2009. This version consists of 358 DRGs and refers to the 200 therapeutic procedures.

(a) The public institutions in Veneto also include 4 private hospitals (accredited healthcare facilities) associated with AIOP and under the control of USL facilities. (b) The high average weight is due to the presence of two accredited healthcare facilities, largely devoted to extremely specialized treatment. Source: data processed by Ermeneia – Studi & Strategie di Sistema based on the Ministry of Health and AIOP data b) but if one compares the incidence out of 1,000 discharges for individual DRGs in 2016 among public institutions and AIOP accredited private institutions, the superiority of the second type of facilities compared to the first is confirmed, except in the case of DRG 110 (Major cardiovascular system procedures with cc), 552 (Other permanent cardiac pacemaker implant w/o major cv dx) and 553 (Other vascular procedures w cc w major cv dx): this largely confirms the quality of AIOP performance levels for a group of DRGs emblematic of highly specialized services.

A further way to understand the contribution of accredited private facilities, this time taken as a whole, in terms of quality of services compared to public facilities, is to compare the incidence of high, medium and low complexity cases for services provided to acute patients during their hospitalization, with reference to the individual regions as well as the national average and that of the individual geographical regions (Table 4). It should be mentioned that in this instance we are talking about accredited private facilities, including private polyclinics, private IRCCS and private foundations, religiously-affiliated classified hospitals, USL facilities, research agencies and, finally, accredited private hospitals.

Furthermore, we have to specify that the level of complexity has been calculated on the weighted classes relative to DRGs, taking into account that this indicator refers to the resources absorbed for the production of each DRG³.

The data shows how the accredited private hospitals (as a whole) account for 19.9% of high-complexity services compared to 14.7% for public hospitals in 2016. And this difference in favor of the accredited private component is even greater in the North (23.2% compared to 15.0%), though it also holds true in Central Italy (19.4% compared to 16.8%) and in the South (16.5% compared to 13.0%).

Looking at the individual Regions, accredited private facilities (as a whole) show a greater incidence of high-complexity services compared to public facilities, except in two cases: that of Lazio (16.7% compared to 17.0%), and that of Campania (11.9% compared to 12.6). Moreover, the positive difference of the accredited hospitals is accentuated in a pronounced manner (sometimes even twice or more) in all the Northern and Central Regions (with the exception of Lazio in particular) and in all the Southern Regions (except for Campania). This phenomenon is immediately evident if we look at the values shown in the last column of Table 4, which are the result of the ratio between the highly complex percentages of the accredited

³ See note in Table 4.

Table 3 – The quality of public and private hospital services, as measured by the incidence rates of extremely specialized $^{(a)}$ DRGs $^{(a)}$

	,	,				
				Private h	Private hospitals (accredited	credited
	Pub	Public institutions	suc	healthcar	healthcare facilities) - AIOP	-AIOP
DRG		(Incidence		(Incid	(Incidence per 1,000	000
	per $1,000$	per 1,000 discharged patients)	patients)	disch	discharged patients)	nts)
	2014	2015	2016	2014	2015	2016
104 Cardiac valve & oth major cardiothoracic proc w card cath	1.061	1.293	1.420	5.273	5.849	5.072
105 Cardiac valve & oth major cardiothoracic proc w/o card cath	1.411	1.626	1.599	2.531	2.737	2.511
106 Coronary bypass w PTCA	0.026	0.031	0.034	0.181	0.179	0.137
108 Other cardiothoracic procedures	0.426	0.501	0.528	0.813	0.822	0.685
110 Major cardiovascular procedures w cc	1.346	1.558	1.598	1.113	1.193	1.079
111 Major cardiovascular procedures w/o cc	1.332	1.531	1.519	2.026	2.199	2.058
515 Cardiac defibrillator implant w/o cardiac cath	1.366	1.596	1.630	1.655	1.736	1.886
535 Cardiac defib implant w cardiac cath w ami/hf/shock	0.266	0.298	0.318	0.550	0.668	0.604
536 Cardiac defib implant w cardiac cath w/o ami/hf/shock	0.323	0.387	0.394	0.556	0.684	0.605
547 Coronary bypass w cardiac cath w major cv dx	0.135	0.165	0.173	0.231	0.238	0.182
548 Coronary bypass w cardiac cath w/o major cv dx	0.366	0.395	0.403	1.364	1.323	1.060
549 Coronary bypass w/o cardiac cath w major cv dx	0.146	0.157	0.179	0.429	0.468	0.438
550 Coronary bypass w/o cardiac cath w/o major cv dx	0.716	0.762	0.752	1.976	2.163	1.866
551 Permanent cardiac pacemaker impl w maj cv dx or aicd lead or gnrtr	1.420	1.607	1.682	1.654	1.926	1.770
552 Other permanent cardiac pacemaker implant w/o major cv dx	4.137	4.865	4.995	4.960	5.042	4.432
553 Other vascular procedures w cc w major cv dx	0.251	0.277	0.296	0.140	0.120	0.121

(*) Inpatient admissions for acute cases.

Mean Incidence

28.096

25.776

22.697

(a) Values calculated with the later CMS DRG Version 24.0 adopted by the Ministry of Health. Source: data processed by Ermeneia – Studi & Strategie di Sistema based on the Ministry of Health and AIOP data.

Table 4 – Comparison of percentages of high, medium and low complexity cases of services provided to acute patients during hospitalization, in public hospitals and accredited private hospitals (as a whole), divided by Regions -2016

		Dublic Locustale			40	od otorina botibone	maitale
		r ubite nospitais			ACC	Accreantea private nospitats	spiiais
Regions	High	Medium	Low	High	Medium	Low	% High complexity – Accr. private
	complexity	complexity	complexity	complexity	complexity	complexity	% High complexity – Public
Piedmont	16.0	34.7	49.3	19.7	23.7	56.6	1.23
Aosta Valley	16.3	34.9	48.8	31.9	9.3	58.8	1.96
Lombardy	14.2	31.2	54.6	24.1	31.7	44.2	1.69
Bolzano	13.5	28.9	57.6		24.0	76.0	
Trento	14.4	35.8	49.8	19.8	27.0	53.2	1.37
Veneto	15.9	34.8	49.3	29.7	31.3	39.0	1.87
Friuli Venezia Giulia	15.4	35.3	49.3	21.3	23.2	55.5	1.38
Liguria	16.6	40.6	42.8	20.6	36.5	42.9	1.24
Emilia Romagna	14.3	35.9	49.8	18.0	27.6	54.4	1.26
Tuscany	17.5	39.8	42.7	36.2	24.8	39.0	2.07
Umbria	15.1	33.1	51.8	30.0	19.3	50.7	1.99
Marche	15.6	36.3	48.1	19.1	23.3	57.6	1.22
Lazio	17.0	34.0	49.0	16.7	33.8	49.5	0.98
Abruzzo	15.4	36.3	48.3	21.4	28.9	49.7	1.39
Molise	11.2	33.5	55.3	28.6	37.5	33.9	2.55
Campania	12.6	30.9	56.5	11.9	28.3	59.8	0.94
Apulia	11.3	32.9	55.8	17.1	35.7	47.2	1.51
Basilicata	13.8	37.6	48.6	35.1	23.3	41.6	2.54
Calabria	11.9	32.1	56.0	29.2	33.2	37.6	2.46
Sicily	15.0	34.9	50.1	18.9	34.2	46.9	1.26
Sardinia	12.3	32.9	54.8	14.3	18.0	67.7	1.16
North	15.0	34.1	50.9	23.2	30.2	46.6	1.55
Center	16.8	36.5	46.7	19.4	31.9	48.7	1.16
South	13.0	33.2	53.8	16.5	31.6	51.9	1.26
Italy	14.7	34.3	51.0	19.9	31.1	49.0	1.35
	sees of complexity	of the DPGs current	thy executeble is the	Cadt ai banietaca t	012 TIIC Agreeme	i pepulani ale in	locos of commission of the DRGs surrently available is that contained in the 2017 TILL A meament also included in the movisions of the 2016 Stability I aw

which excludes high-complexity services from passive mobility control measures, and subsequently extended. The TUC, however, only defines 84 high-complexity DRGs and 108 potentially inappropriate DRGs, nevertheless incorporating a setting aimed at the construction of a fee system designed to compensate inter-regional mobility. This table therefore The classification by classes of complexity of the DRGs currently available is that contained in the 2012 TUC Agreement, also included in the provisions of the 2016 Stability Law utilizes a classification based on weight classes of DRGs, taking into account that this indicator expresses the complexity through the evaluation of the resources used for the production Public hospital services are provided by: Hospital Centers, University Hospital Centers and Public Polyclinics, Public IRCCS and Public Foundations, Directly-Managed Hospitals. Accredited private hospital services are provided by: Private Polyclinics, Private IRCCS and Private Foundations, Classified Hospitals, USL Facilities, Research Agencies, Private of each DRG: the average complexity is between the weight values of 0.9500 and 1.700 and the range of high complexity DRGs is 97% of the TUC high complexity services. healthcare facilities. *

Source: survey by Ermeneia - Studi & Strategie based on data from Minister of Health - SDO 2016

private facilities and the corresponding high complexity percentages of the public facilities; the indicator equal to 1.00 represents parity, while the higher values underline the advantage and those below 1.00 the possible disadvantage of the accredited private facilities.

Moreover, the two-year comparison of the incidence of high complexity services shows an improvement for both types of facilities, but with greater acceleration seen for private accredited facilities compared to public ones, as shown in the chart below:

	% Hig	h complexity Public	-		igh complex Accr. private	•
	2014	2016	Δ	2014	2016	Δ
- North	14.5	15.0	+0.5	20.9	23.2	+2.3
 Center 	15.5	16.8	+1.3	17.0	19.4	+2.4
South	12.0	13.0	+1.0	16.1	16.5	+0.4
Italy	13.0	14.7	+1.7	17.5	19.9	+2.4

If we then consider medium complexity services, we can see that there is a decidedly greater incidence in this case for public hospitals (34.3%) compared to accredited private hospitals (31.1%), except in three cases, namely in Lombardy, Apulia, and Calabria.

While the incidence of low complexity services is very similar: 51.0% for public hospitals and 49.0% for accredited private hospitals as a whole, but with a slight higher concentration in the former, if they are located in the South.

1.3. A good result also in terms of effectiveness of care

The National Outcome Evaluation Program (Programma Nazionale Valutazione Esiti, PNE), developed by Agenas on behalf of the Ministry of Health, provides comparative evaluations of the efficacy, safety, efficiency and quality of the care produced by individual hospitals within the National Health Service.

The indicators developed are discussed in the framework of the PNE Committee, composed of representatives of Regions, Autonomous Provinces, Ministry of Health and scientific institutions, while planning, management, definition of indicators, data analysis and web site management are entrusted to the Department of Epidemiology of the Regional Health Service (Servizio Sanitario Regionale, SSR) of the Lazio Region, in its capacity as Agenas' PNE operational center.

The PNE indicators are an evaluation tool used to support clinical and organizational *auditing* programs aimed at improving effectiveness and equity within facilities of the National Health Service. The functions of these

indicators – it should be remembered – do not include the publication of classifications, rankings or "report cards". Even though the results are processed using media and the most important public reporting portals in the health sector for each data presentation, they are often based on indicators that are not fully evaluated in terms of statistical significance and quality, as well as a correct reading of the basic data: such a circumstance may have inappropriate repercussions in terms of image and clinical reliability for the facilities concerned.

In any case, the PNE indicators have over time assumed strategic importance also as an assessment tool for health care planning and the redefinition of the hospital network and services. In fact, with the issuance of Ministerial Decree 70/2015 – which sets as priorities the implementation of clinical governance, safety of care, research and innovation – indicators of volumes of activity and evaluation of outcomes constitute a central reference for the determination of qualitative, structural, technological and quantitative standards relating to hospital care. Point 4.6 of the Decree states that "both in terms of volumes and outcomes, the minimum thresholds that can be identified at the national level on the basis of scientific evidence, may permit the definition of non-discretionary criteria for the reconversion of the hospital network and potential assessments for accreditation".

The 2017 PNE Report, which is based on 2016 SDO data, highlights 166 indicators, including 67 outcomes/processes, 70 on activity volumes, and 29 on in-hospital stays and represents the most recent evolution along a path of consolidation and maturity of the system which, starting from the 146 indicators from 2015, has proposed some important innovations over time, such as:

- the introduction of new indicators for orthopedics, pediatrics and angiology;
- the publication of brief evaluations of hospital facilities;
- as well as the greater use of auditing tools for the identification of problems relating to the quality of the data used for the calculation of the indicators.

Also for these reasons, beginning with this Report, the usual assessments of the volumes and on the complexity of the services will be supported by these initial outcome evaluations, in order to offer a more complete picture of the Italian hospital system offering, based also on a broader meaning of the concept of quality.

The following tables present an unprecedented public-private comparison report on the PNE outcomes, whose structure follows the approach used for complexity indicators (*average weight* and *case-mix*) but does not go into Regional detail, to give more consistency in terms of the number of cases

and, therefore, of statistical significance. The proposed analysis of the national values and for the three macro areas of North, Central and South Italy, with reference to the 19 TREEMAP indicators⁴, is based on the December 2017 PNE data and shows, in addition to the frequencies and percentages of admissions, the *risk adjustment* (ADJ^5) values relating to the two sectors, together with the corresponding national reference averages.

As can be seen, similarly to what happens with the indicators of complexity, even on the side of the outcomes, the results for the accredited (and not) private hospitals overlap seamlessly with those of the public sector and contribute significantly to the overall improvement witnessed between 2010 and 2016. This improvement was underlined by Agenas, recalling the trend of some significant indicators such as:

- acute myocardial infarction, with 30-day mortality, which went from 10.4% to 8.6%:
- fracture of the neck of the femur, with surgery within 2 days, which increased from 31% to 58%;
- the proportion of births, with a primary cesarean section, which decreased from 29% to 24.5%;
- laparoscopic cholecystectomy, with a percentage of admissions with a post-operative stay of less than 3 days, definitely improved, from 58.8% to 72.7%.

The positive role played in this context by accredited (and not) private hospitals is also evident from the consideration of the ADJ indicators in tables 5, 6, 7 and 8, which highlight for example (comparing the data of the third column with that of the sixth column)⁶:

- at the national level, 16 out of 19 better outcomes in accredited (and not) private hospitals compared to 3 out of 19 in public facilities;

⁴ The TREEMAP indicators constitute a new synthetic assessment tool, by means of which each facility can be evaluated both on the basis of the results obtained for each of the PNE indicators, and on the basis of a synthetic analysis by clinical area, taking into account the validity and the different weight of each indicator. There are 7 main clinical areas considered for the purposes of this new assessment by facility: cardiovascular, nervous, respiratory, general surgery, oncological surgery, pregnancy and childbirth, and musculoskeletal.

⁵ The comparative evaluation of outcomes must take into account the possible differences existing in the population examined, which may include age, gender, the severity stages of pathologies, and comorbidities. The risk adjustment techniques make it possible to analyze the observed variability between facilities and/or territorial areas in terms of relative risk (RR), this index being used as an associative measure. This way the possible 'confounding effect' of the association between outcome and exposure is insulated, as this effect is caused by an uneven distribution of patient characteristics.

 6 The data reported and the construction of the tables of the indicators are based on the significant processing contribution made by Innogea Srl - Palermo.

Table 5 – Compariso	"able 5 - Comparison of outcome indicators (with risk adjustment values) for the 19 TREEMAP indicators, between public hospital and accredited (and not) private hospitals (Itah). Kaar 2017)	ues) for the 19 TREEM	fAP indicato	rs, between	public hospital and ac	ccredited (and not) priv	vate hospitals (Ita	dy, Year 2017)	
Olimical Auca	Indicators	Public hosp	Oublic hospital facilities		Accredited and	4ccredited and non-accredited private facilities	: facilities	Total and national average	al average
Cimical Area	Indicator	Number of cases	% cases	%ADJ	Number of cases	% cases	% ADJ	Number of cases	%ADJ
	Ami: 30-day mortality	78,601	93.7%	8.49	5,275	6.3%	7.37	83,876	8.60
	Ami: % treated with PTCA within 2 days	78,544	93.8%	45.52	5,192	6.2%	56.60	83,736	44.80
	Congestive heart failure: 30-day mortality	113,462	86.4%	10.98	17,908	13.6%	6.94	131,370	10.40
Cardio	Aortocoronary by-pass: 30-day mortality	17,545	%6.99	2.09	8,677	33.1%	2.50	26,222	2.15
circulatory	Valvuloplasty or replacement of heart valves: 30-day mortality	20,464	58.3%	2.65	14,616	41.7%	2.58	35,080	2.66
	Repair of unruptured aneurysm of the abdominal aorta: 30-day mortality	10,156	%9.98	2.04	1,575	13.4%	1.06	11,731	1.69
	Ischemic stroke: 30-day mortality	51,175	95.8%	10.86	2,252	4.2%	7.99	53,427	10.90
Nervous	Surgical intervention for cerebral tumor: 30-day mortality after craniotomy	24,267	88.3%	2.69	3,207	11.7%	2.22	27,474	2.72
Respiratory	Exacerbated COPD: 30-day mortality	60,359	88.4%	10.08	7,914	11.6%	5.10	68,273	9.31
	Laparoscopic Cholecystectomy: % admissions with post-operative hospital stay <3 days	47,227	79.8%	71.86	11,978	20.2%	80.59	59,205	72.72
General Surgery	Laparoscopic Cholecystectomy: % interventions in departments with activity volume> 90 cases			No ADJ	comparison data is av	No ADJ comparison data is available for this indicator	-		73.91
	Surgery for breast tumor: % interventions in departments with activity volume > 135 cases			No ADJ	comparison data is av	No ADJ comparison data is available for this indicator	ır		90.99
Surgical oncology	Proportion of new resection interventions within 120 days from conservative surgery for malign tumor	27,718	%8.08	8.33	6,567	19.2%	66.9	34,285	8.26
1	Surgery for lung tumor: 30-day mortality	17,284	84.5%	1.36	3,177	15.5%	1.37	20,461	1.23
	Surgery for stomach tumor: 30-day mortality	9,412	91.0%	5.50	930	%0.6	2.92	10,342	6.16
	Surgery for colon tumor: 30-day mortality	35,184	94.2%	4.29	2,147	2.8%	3.23	37,331	4.12
	Proportion of births by primary cesarean section	314,645	%6.68	22.91	35,237	10.1%	38.37	349,882	24.52
Pregnancy and Childbirth	Natural births: proportion of complications during childbirth and the puerperium	476,614	92.1%	0.55	40,695	7.9%	0.53	517,309	0.52
	Cesarean births: proportion of complications during childbirth and the puerperium	233,504	84.1%	0.88	44,058	15.9%	0.66	277,562	0.78
N6	Fracture of the neck of the femur: surgery within 2 days	64,259	95.2%	57.77	3,242	4.8%	66.82	67,501	57.80
Musculosacietai	Fracture of the tibia and fibula: waiting times for surgery	5,001	95.1%	4.57	257	4.9%	3.05	5,258	4.00
Course: processing h. Innogea Cul	the Innoces Cul data from Acoust Duck	20.00	Valutario	no Eciti A	ONE Mational Out	man National Validations Esiti (DNE National Ordona Evaluation Purcusa)	7100 1		

Source: processing by Innogea SrI – data from Agenas – Programma Nazionale Valutazione Esti (PNE, National Outcome Evaluation Program), 2017

Clinical Area Ami: % Conges Cardio Aortoc circulatory Valvule						,		the companies of the co	
	Indicaton	Public ho.	Public hospital facilities	ties	Accredited and	Accredited and non-accredited private facilities	ivate facilities	Total and national average	ıal average
	marcator	Number of cases	% cases	%ADJ	Number of cases	% cases	%ADJ	Number of cases	%ADJ
	i: 30-day mortality	36,335	91.5%	8.23	3,361	8.5%	7.14	369'68	8.60
	i: % treated with PTCA within 2 days	36,278	91.5%	45.81	3,361	8.5%	59.10	39,639	44.80
	Congestive heart failure: 30-day mortality	56,853	89.4%	10.15	6,721	10.6%	7.55	63,574	10.40
	Aortocoronary by-pass: 30-day mortality	8,120	%9.02	1.65	3,374	29.4%	1.74	11,494	2.15
day	Valvuloplasty or replacement of heart valves: 30- day mortality	10,180	53.3%	2.40	8,914	46.7%	1.96	19,094	2.66
Repair of South of So	Repair of unruptured aneurysm of the abdominal	4,777	%L'6L	1.69	1,220	20.3%	86.0	2,997	1.69
aoli	a. 30-uay mortanty								
	schemic stroke: 30-day mortality	26,206	95.6%	10.00	1,206	4.4%	7.46	27,412	10.90
Nervous Surgica mortali	Surgical intervention for cerebral tumor: 30-day mortality after craniotomy	13,887	%2.98	2.26	2,135	13.3%	1.48	16,022	2.72
Respiratory Exa	Exacerbated COPD: 30-day mortality	28,592	89.8%	8.32	3,231	10.2%	5.00	31,823	9.31
	Laparoscopic Cholecystectomy: % admissions with	24 000	04 407	90 62	4.019	15 (0)	04 01	20 5 40	CL CL
	post-operative hospital stay <3 days	776,47	04:4%	/3.08	4,018	13.0%	84.81	79,540	77:17
General Surgery Lap	Laparoscopic Cholecystectomy% interventions in departments with activity volume> 90 cases			No ADJ co	No ADJ comparison data is available for this indicator	ailable for this ind	cator		73.91
Sur	Surgery for breast tumor: % interventions in departments with activity volume > 135 cases			No ADJ co	No ADJ comparison data is available for this indicator	ailable for this ind	cator		00.99
Pro	Proportion of new resection interventions within								
	days from conservative surgery for malign	15,509	79.1%	8.73	4,104	20.9%	6.93	19,613	8.26
Sur	Surgery for lung tumor: 30-day mortality	9.142	78.4%	1.31	2.517	21.6%	0.78	11.659	1.23
Sur	Surgery for stomach tumor: 30-day mortality	4,327	83.9%	4.50	833	16.1%	3.13	5,160	6.16
Ins	Surgery for colon tumor: 30-day mortality	18,768	92.8%	4.33	1,447	7.2%	3.19	20,215	4.12
Pro	portion of births by primary cesarean section	158,764	94.7%	17.48	8,927	5.3%	20.74	162,691	24.52
Pregnancy and Childhild chil	Natural births: proportion of complications during childbirth and the puerperium	264,619	94.9%	0.67	14,116	5.1%	0.80	278,735	0.52
	Cesarean births: proportion of complications during childbirth and the puerperium	93,742	94.5%	0.99	5,415	5.5%	1.02	751,66	0.78
Fracti	Fracture of the neck of the femur: surgery within 2 days	29,170	93.0%	64.98	2,181	7.0%	72.67	31,351	57.80
	Fracture of the tibia and fibula: waiting times for surgery	2,444	94.0%	4.06	156	%0.9	2.63	2,600	4.00

Source: processing by Innogea Srl - data from Agenas - Programma Nazionale Valutazione Estit (PNE, National Outcome Evaluation Program), 2017

Table 7 – Comparison o	Table 7 – Comparison of outcome indicators (with risk adjustment values) for the 19 TREEMAP indicators, between public hospital and accredited (and not) private hospitals (Central Italy, Year 2017) Public hospital facilities Total and not-accredited private facilities Total and nation	or the 19 TREEMAP Public ho	REEMAP indicators, bet Public hospital facilities	between pub ies	lic hospital and acc Accredited an	spital and accredited (and not) private hospitals Accredited and non-accredited private facilities	rivate hospitals (Cen private facilities	tral Italy, Year 2017) Total and national average) nal average
Clinical Area	Indicator	Number of cases	% cases	% ADJ	Number of cases	% cases	% ADJ	Number of cases	%ADJ
	Ami: 30-day mortality	16,253	%9.96	7.41	899	3.4%	8.71	16,821	8.60
	Ami: % treated with PTCA within 2 days	16,253	97.1%	49.53	485	2.9%	39.86	16,738	44.80
	Congestive heart failure: 30-day mortality	22,393	89.5%	11.01	2,717	10.8%	8.73	25,110	10.40
Cardio	Aortocoronary by-pass: 30-day mortality	4,287	92.4%	2.31	322	%9°L	1.56	4,642	2.15
circulatory	Valvuloplasty or replacement of heart valves: 30-day mortality	6,223	90.3%	2.22	699	%L'6	2.18	6,892	2.66
	Repair of unruptured aneurysm of the abdominal aorta: 30-day mortality	3,037	100.0%	1.34			0.00	3,037	1.69
	Ischemic stroke: 30-day mortality	9,541	%9'.26	9.40	234	2.4%	5.46	9,775	10.90
Nervous	Surgical intervention for cerebral tumor: 30-day mortality after craniotomy	5,671	%6.86	2.82	59	1.1%	3.38	5,736	2.72
Respiratory	Exacerbated COPD: 30-day mortality	11,415	91.7%	10.03	1,028	8.3%	06.6	12,443	9.31
S	Laparoscopic Cholecystectomy: % admissions with post-operative hospital stay <3 days	10,650	%8.68	77.62	1,204	10.2%	85.04	11,854	72.72
General Surgery	Laparoscopic Cholecystectomy% interventions in departments with activity volume> 90 cases			No ADJ co	No ADJ comparison data is available for this indicator	ailable for this ind	icator		73.91
	Surgery for breast tumor: % interventions in departments with activity volume > 135 cases			No ADJ co	No ADJ comparison data is available for this indicator	ailable for this ind	icator		00.99
	Proportion of new resection interventions within	2199	701 80	7 50	861	700 1	81.9	122.9	908
Surgical	120 days from conservative surgery for marign tumor	0,043	98.1%	65.7	128	1.9%	0.48	0,771	07.0
	Surgery for lung tumor: 30-day mortality	5,010	98.7%	1.31	89	1.3%	2.03	5,078	1.23
	Surgery for stomach tumor: 30-day mortality	3,028	100.0%	5.09	•		0.00	3,028	6.16
	Surgery for colon tumor: 30-day mortality	8,822	99.4%	3.70	51	%9.0	2.98	8,873	4.12
	Proportion of births by primary cesarean section	64,434	93.4%	23.90	4,557	%9.9	34.37	68,991	24.52
Pregnancy and	Natural births: proportion of complications during childbirth and the puerperium	94,589	94.3%	0.45	5,726	5.7%	0.39	100,315	0.52
Childoliu	Cesarean births: proportion of complications during childbirth and the puerperium	45,002	90.2%	99:0	4,894	%8'6	0.57	49,896	0.78
Museuleclebel	Fracture of the neck of the femur: surgery within 2 days	14,319	%5'96	62.68	524	3.5%	74.66	14,843	57.80
Musculosneiciai	Fracture of the tibia and fibula: waiting times for surgery	1,176	94.7%	4.39	99	5.3%	3.00	1,242	4.00

Source: processing by Innogea SA – data from Agenas – Programma Nazionale Valutazione Esiti (PNE, National Outcome Evaluation Program), 2017

Table 6 – Comparison	ane 8 - Comparson of autome macains with 18st adjustment values) for the 19 Technical macains are accepted by the 19 Technical macains with a second productory and the 19 Technical macains and accepted and non-accepted private locilities. Public hospital facilities Accepted and non-accepted private locilities.	r me 19 1 KEEMAF Public ho	Public hospital facilities	berween puou ties	c nospitat and acer. Accredited an	ottat ana accreatiea (ana not) private nospitats Accredited and non-accredited private facilities	rvate nospitats (500 rrivate facilities	Total and national average	nal average
Ulmical Area	Indicator	Number of cases	% cases	% ADJ	Number of cases	% cases	%ADJ	Number of cases	%ADJ
	Ami: 30-day mortality	26,013	95.1%	9.55	1,346	4.9%	7.40	27,359	8.60
	Ami: % treated with PTCA within 2 days	26,013	95.1%	42.61	1,346	4.9%	56.39	27,359	44.80
	Congestive heart failure: 30-day mortality	34,816	80.4%	12.34	8,470	%9.61	5.89	43,286	10.40
Cardio	Aortocoronary by-pass: 30-day mortality	5,138	%6:09	2.62	4,948	49.1%	3.09	10,086	2.15
circulatory	Valvuloplasty or replacement of heart valves: 30-day mortality	4,061	44.7%	3.94	5,033	55.3%	3.75	9,094	2.66
	Repair of unruptured aneurysm of the abdominal aorta: 30-day mortality	2,032	85.1%	3.64	355	14.9%	1.35	2,387	1.69
	Ischemic stroke: 30-day mortality	15,428	%8'96	13.22	512	3.2%	10.72	15,940	10.90
Nervous	Surgical intervention for cerebral tumor: 30-day mortality after craniotomy	4,709	82.4%	3.78	1,007	17.6%	3.73	5,716	2.72
Respiratory	Exacerbated COPD: 30-day mortality	20,352	84.8%	12.57	3,655	15.2%	3.84	24,007	9.31
-	Laparoscopic Cholecystectomy: % admissions with post-operative hospital stay <3 days	11,655	65.4%	63.97	951'9	34.6%	76.56	17,811	72.72
Oeneral Surgery	Laparoscopic Cholecystectomy% interventions in departments with activity volume> 90 cases			No ADJ сог	No ADJ comparison data is available for this indicator	ailable for this indi	cator		73.91
	Surgery for breast tumor: % interventions in departments with activity volume > 135 cases			No ADJ coi	No ADJ comparison data is available for this indicator	ailable for this indi	cator		00.99
Survivo	Proportion of new resection interventions within	995 5	70 40%	8 00	588 C	%9 bc	7.17	106 2	97.8
oncology	table days nom conservative surgery for margin tumor	2,200	0.4.0	0.03	666,7	62.070	71.1	106,1	0.20
1	Surgery for lung tumor: 30-day mortality	3,132	84.1%	1.56	592	15.9%	3.81	3,724	1.23
	Surgery for stomach tumor: 30-day mortality	2,057	95.5%	8.21	26	4.5%	1.14	2,154	6.16
	Surgery for colon tumor: 30-day mortality	7,594	92.1%	4.89	648	7.9%	3.34	8,242	4.12
	Proportion of births by primary cesarean section	91,447	%8.08	31.63	21,753	19.2%	46.45	113,200	24.52
Pregnancy and	Natural births: proportion of complications during childbirth and the puerperium	117,406	84.9%	0.35	20,853	15.1%	0.38	138,259	0.52
	Cesarean births: proportion of complications during childbirth and the puerperium	94,760	73.7%	0.87	33,749	26.3%	0.61	128,509	0.78
Mucaulankalatal	Fracture of the neck of the femur: surgery within 2 days	20,770	%5''.26	44.26	237	2.5%	35.40	21,307	57.80
Musculosneielai	Fracture of the tibia and fibula: waiting times for surgery	1,381	97.5%	5.61	32	2.5%	5.00	1,416	4.00

Source: processing by Innogea Srl - data from Agenas - Programma Nazionale Valutazione Estit (PNE, National Outcome Evaluation Program), 2017

- in the cases analyzed for North Italy, 15 out of 19 better outcomes for accredited (and not) private hospitals compared to 4 out of 19 for public hospitals;
- in the cases analyzed for Central Italy, 12 out of 19 better outcomes for accredited (and not) private hospitals compared to 6 out of 19 for public hospitals;
- and finally, in the cases analyzed for South Italy, 14 out of 19 better outcomes for accredited (and not) private hospitals compared to 5 out of 19 for public hospitals.

1.4. Overall a positive user assessment, albeit slightly decreasing over time

Already in the previous sections mention has been made of the dual logic of the Italian hospital system, which is based primarily on the presence of public facilities, on the one hand, and accredited private facilities, on the other, to which are also added private clinics (upon payment). More specifically, "objective" indicators have been compared, those concerning both the level of complexity of the services provided and the results obtained in terms of effectiveness of the treatments.

But it is also worth considering some "subjective" indicators, those which refer to opinions and assessments provided by both citizens and actual users on the basis of the economic surveys conducted each year for this Report.

Table 9 below shows the data gradually collected through the surveys referred to for every second year and the year 2018. These are the opinions of citizens regarding the mixed public/private hospital system that Italy enjoys. As relates to this, it should be underlined that this situation has its roots in laws that go back to Legislative Decree 502/1992, but has more than anything become over time a mixed system that is well thought of, appreciated and used by people who actively engage with it. In fact, the data in aforementioned Table shows how more than 8 out of 10 respondents:

- recognize that "accredited private hospitals are part of the overall hospital system and they do not consider whether a facility is a public or accredited private one when an in-hospital stay is necessary, but rather evaluate other factors such as the presence of a specialization, the quality of services, proximity to home, etc." (85.9% agreement both in 2017 and in 2018);
- but also underline that "the government should make the best use of all
 the hospitals in the area whether they are public or accredited private facilities, in order to allow citizens the best possible choice according to

their needs, opportunities and opinions" (86.6% agreement in 2017 and 86.5 in 2018);

Added to this is the fact that almost 8 out of 10 respondents suggest that, "Regional and local health authorities (ASL) should engage in appropriate public information campaigns to encourage free choice, given that little is currently known about the various opportunities of admissions offered by the accredited private hospitals" (77.7% consensus in 2017 and 77.8 in 2018).

As can be seen from the data reported, the full perception of the existence of a mixed public/private hospital system has become well established over time: and this perception is solid despite the lengthy crisis experienced by families and despite the gradual entry of new generations into the position of potential or real users and, above all, of caregivers, with the consequent need to get to know the Italian hospital system better.

If we go on to consider the level of satisfaction with the services received from users who have actually made use of hospital services during the last twelve months (see Table 10), we see the result (expression of the opinions "very + quite satisfied"):

- extends to more than 3/4 of respondents in 2018, and is true for 77.7% of those who used public hospitals, and increases to 93.0% for respondents who used accredited private hospitals and 86.1% of people who used private clinics:
- but it can also be seen to decrease over the years, going for public hospitals from 87.8% in 2011 to 77.7% in 2018, while managing to remain at high levels, albeit slightly lower, for accredited private hospitals (from 95.3% positive in 2011 to 93.0% in 2018, with some alternating opinions in the intermediate years): this is also the case for private clinics (upon payment) for which the overall level of satisfaction remains high, although it experiences a drop between 2011 (96.6%) and 2018 (86.1%).

If we delve deeper into the level of satisfaction for the year 2018, and compare the opinions expressed by the respondents as a whole with those of the residents in the various geographical areas, it is possible to observe that:

- for public hospitals, these ratings rose from an average of 77.7% to 80.3% in the case of people living in the North-West of the country, 81.2% for those in the North-East, but also 80.3% for those in Central Italy, whereas satisfaction ratings fall to 69.4% for the South and the Islands;
- for accredited private hospitals, positive assessments rose further than the already high average of 93.0%, to 97.4% for respondents in the North-West and 99.4% for those in the North-East, while they dropped for people living in Central Italy (68.8%), yet rise again to more than 90%

 Table 9 – The positive perception of a mixed public/private hospital system among citizens (% val.)1

Phenomena				Data			
	2007	2009	2011	2013	2007 2009 2011 2013 2015 2018^2	2017	2018^{2}
- "The accredited private hospital is now a part of the overall hospital system							
and that they do not consider whether the facility is public or private when							
a hospital stay is needed, but rather take into account other factors such as	0 00	000	7 00	60	60	0 20	0 20
the necessary specialization, the quality of the services provided, the prox-	0.00	6.00	0.00				
imity to their home, and so on. ("Very + somewhat agree" opinions ex-							
pressed by citizens not including "do not know" answers)"							
- "The government should make the best use of all the hospitals in the area							
(public and private), in order to allow citizens the best possible choice ac-	010	0.70	00	00	000	9 90	3 70
cording to their needs, opportunities and opinions ("Very + somewhat	91.0	0.4.0	70.1	00.1			
agree" opinion expressed by citizens not including "do not know" answers)"							
- "Regions or local health authorities should invest in appropriate information							
campaigns to make citizens aware of their freedom to choose, since little is							
known about the various opportunities of admissions that accredited private 86.6	9.98	84.3	80.3		77.1 79.7 77.7 77.8	7.77	77.8

(1) See for data up to the year 2017 Table 5/ Part One, p. 60 of the Report Health & Hospitals/2017 (data are net of missing responses). not including "do not know" answers)" (2) See Part Two/Table 14, pp. 132-135.

hospitals offer" ("Very + somewhat agree" opinions expressed by citizens

Source: survey by Ermeneia - Studi & Strategie di Sistema, 2018

Table 10 – The positive perception of the services received by actual users of hospital services used in the last twelve months, with reference to the three types of hospital facilities and geographical location (% val.)

							Year 2018		
Answers	2011	2013	2015	2017	Total	North-West	North-West North-East	Center	South and Islands
Public hospitals									
 Very satisfied 	29.0	24.3	23.0	19.7	19.7	23.8	29.4	13.0	11.4
 Quite satisfied 	58.8	60.4	59.6	66.2	58.0	56.5	51.8	67.3	58.0
 Very + quite satisfied 	87.8	84,7	82,6	85,9	7,77	80,3	81,2	80,3	69,4
Accredited private hospitals									
 Very satisfied 	50.7	37.6	34.0	26.4	29.7	24.9	32.5	39.1	29.2
 Quite satisfied 	44.6	53.7	54.7	8.69	63.3	72.5	6.99	29.7	67.2
 Very + quite satisfied 	95,3	91,3	88,7	96,2	93,0	97,4	99,4	8,89	96,4
Private clinics									
 Very satisfied 	46.7	24.9	38.2	37.3	35.7	27.1	49.9	52.5	19.4
 Quite satisfied 	49.9	57.4	52.3	54.8	50.4	43.6	41.3	8.44	73.3
- Very + quite satisfied	9.96	82.3	90.5	92.1	86.1	70.7	91.2	97.3	92.7

- Very + quite sausified of the Strategie di Sistema, 2018
Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

- (96.4%) for those living in the South and in the Islands (probably the result of particularly careful choices by patients and their families);
- and finally, for private clinics (upon payment), the best ratings with respect to the sample average (equal to 86.1%) came from respondents in the North-East (91.2%), Central Italy (97.3%), and also the South (92.7%), though they experience a decrease when also considering people who live in the North-West of Italy (70.7%).

1.5. A stable Resource/GDP ratio that shows a phenomenon of underfunding compared to other countries

The National Health Service is therefore committed to ensuring the best possible performance levels of services that often increase from the point of view of their complexity and which garner significantly positive assessments – albeit slow declining over time – by users.

And yet the incidence of public health spending on GDP has tended to decrease over the years. We are witnessing a process that has increased over time as a result of the impact of the long economic crisis, along with the consequent effort to control and reduce public spending. A comparison with other countries (see Table 11) shows how the Italian public health expenditure still stood at 7.2% of GDP in 2010 (with the crisis already started), but then remained stable at 6.8 % between 2011 and 2014, and then decreased further to 6.7% in 2015 and 2016. The trend of this data shows not only a reduction in the incidence of such spending on GDP, but it is necessarily calculated on the latter which, however, was in decline throughout 2013: the result is that we find ourselves dealing with a dual crunch compared to other countries, deriving from a lesser impact on national wealth but also from a decreasing denominator, upon which the percentage in question is calculated.

On the contrary, the OECD countries are characterized by consistently better values than Italy. In fact:

- the OECD average remained higher than 7% in the years considered: it was 7.5% in 2010 and then decreased slightly over time to stabilize at 7.2% for the European OECD countries and even up to 7.6% % for the average of the total OECD countries (which in turn have shown a faster and more intense recovery compared to Italy);
- other neighboring countries, such as Germany and France, already exceeded 8% of GDP in 2010 (8.6% for the former and 8.7% for the latter) and even more than 9% were positioned in 2016 (9.4% for Germany which had already reached 9.0% in 2012 and 9.6% for France).

Furthermore, an even more disparate situation can be observed between Italy and the other OECD members if we consider the trend in total health care spending (see the second part of Table 11). In fact, this expenditure amounted to 9.7% of GDP for all European OECD countries in 2010, remained steadily above 9% even during the crisis, and stood at 9.4% in 2016. And even the total of the OECD countries was higher, reaching 10.0% in 2010 and then coming to rest at 9.8% between 2012 and 2016.

Table 11 – Amount of total healthcare expenditure and public healthcare spending in relation to the GDP

0/ Walion		P	ublic he	althcare	expendit	ure	
% Values	2010	2011	2012	2013	2014	2015	2016
United States	7.9	7.9	7.9	8.0	13.4 ¹	13.8 ¹	14.0 ¹
Japan	7.8	8.2	9.4	9.1	9.1	9.1	9.1
Germany	8.6	8.1	9.0	9.2	9.2	9.3	9.4
France	8.7	8.4	8.5	8.6	8.9	8.8	9.6
Italy	7.2	6.8	6.8	6.8	6.8	6.7	6.7
United Kingdom	-	7.4	6.9	7.8	7.7	7.8	7.8
Canada	7.4	7.2	7.2	7.1	7.0	7.3	7.4
Average of G7 countries (*)	7.9	7.7	8.0	8.1	8.9	9.0	9.1
Average of European OECD countries (*)	7.5	7.1	7.3	7.2	7.2	7.1	7.2
Average of all OECD countries (*)	7.5	7.2	7.3	7.3	7.3	7.5	7.6
0/ W-L		7	Total hea	lthcare (expenditi	ure	
% Values	2010	2011	2012	2013	2014	2015	2016
United States	16.4	16.4	16.4	16.3	16.5	16.8	17.1
Japan	9.5	10.0	11.2	10.8	10.8	10.9	10.8
Germany	11.2	10.7	10.8	11.0	11.0	11.1	11.1
France	11.1	10.7	10.8	10.9	11.6	11.5	11.5
Italy	8.9	8.8	8.8	9.0	9.0	9.0	8.9
United Kingdom	8.9	8.5	8.5	9.9	9.7	9.8	9.8
Canada	10.5	10.3	10.3	10.1	10.0	10.4	10.5
Average of G7 countries (*)	10.9	10.8	11.0	11.1	11.2	11.4	11.4
Average of European OECD countries (*)	9.7	9.2	9.4	9.5	9.4	9.3	9.4
Average of all OECD countries (*)	10.0	9.6	9.8	9.8	9.8	9.8	9.8

^(*) Averages are calculated as unweighted arithmetic means.

In fact, the main distinction is between "mandatory coverage" and "voluntary coverage" in the amount of financing of health expenditure in the OECD. In the past, "mandatory" and "public" were considered synonymous and in many countries both amount to the same figure.

The reasons for the change in the incidence of spending in the United States, which actually starts from 2014 onwards, are due to the methods for classifying health expenditure begun in that period. There is a "personal mandate", according to US law, according to which an individual is obliged to have health insurance. Therefore, while this insurance is often individual or business insurance, in fact it is classified as "mandatory" and therefore assimilated to "public" insurance.

It should be kept in mind that a better indication of "public/private" health care funding can be seen by taking into account the contribution mechanisms, in which case the government transfers of social contributions would represent 8-9% of GDP (consistent with the trend that emerges in the first row of Table 11).

Beside the comments provided by the OECD, it can be observed that the relative incongruity of the percentages exposed is noticeable since it is known that in the United States a large part of the health coverage is still charged to the private sector, while the percentages of health care expenditure defined as "public", shown in Table 11, tends to (improperly) approximate total health care spending.

Source: Ermeneia processing of "OECD Health Data 2017", OECD, Paris, October 2017

⁽¹⁾ As regards the radical upward trend starting from 2014 relating to the incidence of public health expenditure with respect to GDP, in the case of the United States, a clarification was requested from the OECD which specified the following:

On the other hand, Italy's total health care expenditure incidence on the GDP was 8.9% in 2010, with a subsequent fluctuation around this value between the years 2011 and 2016, when it was once again 8.9%: but take into account that Germany and France outdistanced us significantly, given that the incidence on GDP was 11.2% and 11.1% in 2010, respectively, stood at 10.7% and 10.8% in 2011 and 2012 and then rose again in 2016 to 11.1% for Germany and 11.5% for France.

The situation is therefore largely unfavorable for us due to the reasons mentioned above, not only because of the divergence of the incidence of total health expenditure on the GDP but also for the stronger and earlier recovery of the other countries compared to Italy.

If we then look at the trend in health and hospital spending at the national level in Italy based on more detailed data (see Tables 12 and 13), it is possible to see how in the period 2010-2016:

- total public healthcare spending at current prices increased by 2.2%, but at constant prices it actually fell by 4.8%;
- total public hospital spending at current prices increased a little more than total public health care spending, which was 4.3% (compared to the 2.2% previously mentioned), but also in this case the increase at constant prices ended up with a decrease of 2.8% over six years;
- in the period 2010-2016, total accredited private hospitals spending fell by 4.1% at current prices, but 10.6% at constant prices;
- and finally, hospital spending specifically dedicated to private facilities (accredited healthcare facilities) actually decreased at current prices, over the course of six years, by 2.0%, which however becomes 8.6% at constant prices.

It should be recalled that this last type of hospital facility (accredited healthcare facilities) must be compared with the different Regional Health Systems which, faced with the difficulty of intervening in terms of rationalizing spending and even more on the organization and efficiency of the services, ends up trying to reduce the cost and the services provided by these facilities, using extremely different methods and gradually consolidating them over time. Finally, Table 14 below shows that this can be done by the Regions:

- using the "ceiling" system for services: this occurred in 95% of cases in 2018, which actually includes 100% for hospitalization services and 88.9% for outpatient services;
- by applying, in the event of exceeding the "ceiling", a tariff regression that seems to have regained strength in the last three years: this occurred in 38% of cases in 2018, compared to 32% in 2017, and 24% in 2016;

- by delaying invoice payments in 39% of cases in 2018 (but with a slight decrease of this delay over time), by as much as 4.0 months;
- but paying the Centers a monthly amount, a solution that now involves about 70% of the Regional institutions during the last four years indicated in Table 14 (and this amount is now seen to exceed 80%, again in the last four years);
- and resorting when appropriate to a system of factoring in order to be able to guarantee certain payments on time: but this has been done for a couple of years only in 20% or a little less of the cases.

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	70.	2010	2011	11	2012	2	2013	13	20	2014	2015	15	20	2016
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	billions		billions		billions		billions		billions		billions		billions	
Public hospital	52.333	100.0	52.333 100.0 52.892 101.1	101.1	53.074	101.4	52.244	8.66	<i>S</i> 3.074 101.4 52.244 99.8 52.744 100.8	100.8	53.847	102.9	53.847 102.9 54.566 104.3	104.3
Accredited hospitals	8.849	100.0	8.641	8.641 97.6	8.659	97.9	97.9 8.255	93.3	8.425	8.425 95.2	8.466	95.7	8.484	95.9
incl.: priv. hosp. (accredited healthcare	4.439	100.0	4.465	4.465 100.6	4.471	100.7	100.7 4.263	0.96		4.289 96.6	4.335	7.76	4.351	98.0
facilities) Total public hospital	61 100	0001	61 533	1006	61 522 100 6 61 723		007 09	0 00	031.13	000	0 101 61662 0 001 1021 13 0 00 001 02 0 001	0101	030 63	103
expenditure	01.102		666.10	100.0	01./33		00.433	70.9	01.109	100.0	02.313	0.101	05.050	103.1
Otner expenditure features	50.149	100.0	51.276 102.2	102.2	51.950	103.6	103.6 51.185	102.1	51.504	51.504 102.7	50.354 100.4	100.4	50.681	101.1
Total public healthcare 111.331 100.0 112.809 101.3 113.683 102.1 111.684 100.3 112.673 101.2 112.667 101.2 113.731 102.2 expenditure	111.331	100.0	112.809	101.3	113.683	102.1	111.684	100.3	112.673	101.2	112.667	101.2	113.731	102.2

experienced a break due to the uncertainty of the continuity of its publication by the RGE in the future. For 2013, 2014 and 2015 the expenditure figures were taken from the 2015, 2016 and 2017 Report on the coordination of public finance by the Court of Auditors and the Agenas Report on the monitoring of the Source: data processed by Ermeneia from the "General Report on Italy's economic situation", 2012, Vol. II, from the 2015, 2016 and 2017 "Report on the coordination of public finance" by the Court of Auditors and the Agenas Report on the monitoring of the spending of the Regions. spending of the Regions.

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	billions	I.N.	billions	I.N.	billions	I.N.	billions	I.N.	billions	I.N.	billions	I.N.	billions	
	of euro		of euro		of euro		of euro		of euro		of euro		of euro	
Public hospital facilities	52.333	100.0	52.127	9.66	51.594 98.6	9.86	50.179	95.9	50.178	6:56	50.754	97.0	50.861	97.2
Accredited hospitals	8.849	100.0	8.516	96.2	8.418	95.1	7.929	9.68	8.015	9.06	7.980	90.2	7.908	89.4
ncl.: priv. hosp. accredited healthcare	4.439	100.0	4 4.	99.1	4.346	97.9	4.094	92.2	4.080	91.9	4.086	92.0	4.056	91.4
facilities) Total public hospital expenditure	61.182	100.0	60.643	99.1	60.011	98.1	58.108	95.0	58.193	95.1	58.734	0.96	58.769	96.1
Other expenditure features	50.149	100.0	50.534	100.8	50.501	100.7	49.162	98.0	48.998	7.76	47.461	94.6	47.240	94.2
Total public healthcare expenditure	111.331	100.0	111.176	6.66	110.513	99.3	107.269	96.4	107.191	96.3	106.195	95.4	106.009	95.2

Source: data processed by Ermeneia from the "General Report on Italy's economic situation", 2012, Vol. II, from the 2015, 2016 and 2017 "Report on the coordination of public finance" by the Court of Auditors and the Agenas Report on the monitoring of the spending of the Regions. *) GDP deflator calculated on the basis of the new ISTAT series in a chained series with reference to 2010.

Table 14 – The change in the method of financial charges and settlement of debts of the private hospitals (accredited healthcare facilities) $^{(a)}$

table 14 - The change in the method of financial changes and semement of acots of the private hospitals (acot cancal regimes)	30 212 17	מנות זכנו	to money	l decors of	שני ליו יינים	nospinais	(מנינו נימונו	ממווונו	are Jacus	(63)		
M					%	% of total cases examined	ses exami	peu				
Mechanisms	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2002
 The system of "ceilings" has been applied to services in the past twelve months 	(q) %S6	%06	%68	83%	%56	100%	%56	94%	94%	84%	100%	100%
 A regression rate was applied in the event of overshooting the "ceilings" 	38%	32%	24%	32%	35%	%0\$	41%	20%	20%	%95	72%	%02
 Average regression applied compared to the full price 	25%	42%	27%	44%	39%	43%	51%	35%	40%	45%	%44%	52%
 Payments for bills are delayed 	36%	39%	39%	%09	52%	61%	%89	72%	75%	%6 <i>L</i>	77%	%06
A	4.0	4.6	4.4	4.7	10.9	12.5	0.9	6.9	11.8	11.6	8.0	7.3
 Average detay in months 	months	months	months	months	months	months	months	months	months	months	months	months
 A monthly payment is made on the invoices of private hospitals (accredited healthcare facilities) 	71% (c)	78%	72%	%02	%98	75%	63%	78%	83%	83%	72%	70%
 Average size of the payment compared to the invoice 	%98	%18	%88	84%	%69	%62	84%	%62	%08	75%	%02	77%

As with every year, a special survey of privileged witnesses was conducted at the level of the individual Italian Regions. This panel is composed of the AIOP Regional Presidents, who annually respond to a detailed quantitative/qualitative questionnaire. payments and due dates a

12%

11%

18%

17%

37%

40%

35%

30%

33%

21%

18%

A factoring system was applied to ensure

(b) In 2018 it was actually 100.0% for admission services and 88.9% for outpatient services.

The advance is paid, but not regularly, for 40% of cases in 2007, 39% of cases in 2008 and 2009, 41.2% of cases in 2010, 44.5% in 2011, 15.8% in 2012, 25% in 2013, 29% in 2014, 25% in 2015, 27.8% in 2016, 27.8% again in 2017 and, finally, 11.8% in 2018. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018 3

2. The "funnel" of the waiting lists

2.1. A phenomenon of large numbers and of medium-long waits

Over the last twelve months 30.7% of the adult Italian population has been placed on waiting lists for access to services provided by the local health authorities, such as laboratory tests, diagnostic exams (X-Ray, CAT, Magnetic Resonance, etc.), specialist visits or small outpatient procedures: this translates to 15.6 million people who have had a single experience (15.3%), or another 15.4% who have had 2 or more experiences (see the first part of Table 15).

Here below are the reasons for the use of services by the aforementioned 15.6 million people, according to the statements of the respondents¹:

- 17.4% due to the need for a service related to a serious illness and/or procedure:
- 63.8% due to the need for a service related to a mild illness and/or procedure:
- 9.9% due to the need for a service related to a mild illness and/or procedure that then became serious;
- and the remaining 8.9% gave no specific indication as to their need.

The type of service most used was diagnostic tests (42.1%), followed by specialist visits (34.1%), laboratory tests (16.1%), and small outpatient procedures (6.4%).

The length of the wait for about 1/3 of the services relating to specialist visits and small outpatient procedures was from over 60 days up to 120 days and even more: the longer wait was experience by 17.7% of respondents in the first case and 11.2% in the second case.

¹ See Part Three/Table 2, p. 151.

 An experience that, over the last 12 months, has affected almost 4 out of 10 adults (% val.
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Table 1

Table 15 – An experience that, over the last 12 months, has affected almost 4 out of 10 adults (% val.)						
Phenomena			Data	a		
WAITING LISTS FOR ASL SERVICES — Percentage incidence on the adult population of people with one or more experiences of waiting lists for access to ASI, services (Jahoratory lests, diamostic tests, specialist visits and/or small outmatient proce-						
dures)', of which:				30.	30.7 (equal to 15.6 mil.)	15.6 mil.)
• 1 single experience				15	15.3 (equal to 7.8 mil.)	o 7.8 mil.)
• 2 or more experiences				15	15.4 (equal to 7.8 mil.)	o 7.8 mil.)
 Percentage incidence on the total number of people on waiting lists for ASL services, with a wait of up to 					30-60	60-120
30 days, over 30 and up to 60 days and over 60 and up to 120 days and more ² :			$\rightarrow 30 \ days$	days	days	$days \rightarrow$
 For diagnostic tests, such as X-Ray, CAT, Magnetic Resonance, etc. (1st place: 42.1%) 				57.3	20.0	22.7
• For specialist visits (2nd place: 34.1%)			•	41.8	22.6	35.6
 For laboratory tests (3rd place: 16.1%) 			•	90.2	6.7	3.1
• For small outpatient procedures (4th place: 6.4%))	60.3	8.6	31.1
 Behaviors adopted by people who were on waiting lists for access to ASL services³: 						E
 Awaited their turn 						<u>101al</u> 69.4
 Resorted to other behaviors (recourse to other public hospitals, accredited private hospitals or private 						
clinics with shorter waiting lists or paid private services)						30.6
WAITING LISTS FOR HOSPITAL ADMISSION						
 Percentage incidence on the adult population of people who had one or more experiences with waiting 						
lists for access to hospital admissions ⁴ , of which:				ω	8.0 (equal to 4.0 mil.)	o 4.0 mil.)
I single experience				υ.	6.2 (equal to 3.1 mil.)	o 3.1 mil.)
Z or more experiences	1			_	.8 (equal to 910,000)	910,000)
 Percentage incidence on the adult population of people who had one or more experiences with waiting 	For serious	ions		For mild		
lists for access to hospital admissions lasting up to 30 days, over 30 and up to 60 days, and over 60 and	treatment/surgical	surgical	tre	treatment/surgical	sal	
up to 120 days and more, according to the facilities used ⁵ :	procedures	ures		procedures		Iotal
 Public hospital facilities 	38.2	2		27.8		0.99
 Accredited private facilities 	11.6	9		6.7		18.3
(Upon payment) Private clinics	13.1	1		2.6		15.7
	Serious treatment/procedures	tment/proce	dures	Mild trea	Mild treatment/procedures	sedures
 Percentage incidence on the adult population of people who experienced waiting lists for access to hospital 		30-60	60-120	→ 30	30-60	60-120
admissions lasting from 10-60 days, and up to 60-120 days and more, according to the facilities used ⁶	days	days	$\frac{days}{d}$	days	days	$days \rightarrow$
			ana more			
 Public hospital facilities Accredited private facilities 	66.7 76.8	18.3	15.0	46.8	30.9	22.3
recreated private actions		200	2:0	2		

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 Behaviors adopted by people who were placed on waiting lists for hospital admission?: 		Total
 Patiently awaited their turn 		6.89
 Other types of behaviors adopted (recourse to other public hospitals, accredited private hospitals, 		1 10
facilities outside the Region, etc.)		51.1
MULTIPLE EXPERIENCES WITH WAITING LISTS AND CONSEQUENCES ON POSTPONEMENT		
AND FORGOING OF CARE		
 Percentage incidence on the total number of people who, having experienced one or more waiting lists 		
for ASL services, were also placed on the waiting list for hospital admissions8		20.3 (equal to 3.2 mil.)
 Percentage incidence on people who, having had one or more experiences with waiting lists for hospital 		
admissions, also experienced waiting lists for ASL services ⁹		77.0 (equal to 3.1 mil.)
- Percentage incidence on the people who, having had one or more experiences with waiting lists for ASL		
services and/or hospital admissions, also had one or more ER experiences ¹⁰ , of which	ASL waiting lists	Hospital waiting lists
■ In public hospitals	36.7 (5.7 mil.)	44.0 (1.8 mil.)
 In public hospitals + Accredited private hospitals + Private clinics 	48.5 (7.6 mil.)	76.0 (3.0 mil.)
 Priority importance of the length of waiting lists to the effects of postponement and/or forgoing of treat- 		
ment, according to caregivers 11	2017	2018
 Waiting lists for services are too lengthy 	2° (47.6)	1° (51.7)
 Family financial difficulties (to pay for co-payment charges, access, services, etc.) 	1° (48.8)	2° (30.0)
 Bureaucratic difficulties in gaining access to services 	3° (16.1)	3° (19.2)
 The reduction of treatments (and services) offered to patients 	4° (14.0)	4° (16.1)
 The deterioration of treatments (and services) offered to natients 	5° (10.0)	5° (13.1)

-	In public hospitals + Accredited private hospitals + Private clinics	48.5 (7.6 mil.)	
Pri	riority importance of the length of waiting lists to the effects of postponement and/or forgoing of treat-	1	
mei	nt, according to caregivers ¹¹	2017	
•	Waiting lists for services are too lengthy	2° (47.6)	
•	Family financial difficulties (to pay for co-payment charges, access, services, etc.)	1° (48.8)	
•	Bureaucratic difficulties in gaining access to services	3° (16.1)	

•	- Dui cauciario dil lical des mi ganning access to sei vices	ō	,	(10.1)	,	(17.7)
•	The reduction of treatments (and services) offered to	patients	4	(14.0)	4	(16.1)
•	The deterioration of treatments (and services) offere	d to patients	<u></u> ک	(10.0)	2°	(13.1)
(1) Se	1) See Part Three/Table 1, p. 150.	(7) See Part Three/Table 10, p. 163.				
(2) S	See Part Three/Table 3, p. 152 and Table 5, p. 156.	(8) See Table A7/"Enhanced" Sample of the Statistical Appendix,	p. 409 (2	409 (20.3% was calculated out of the EUR 15.6	out of tl	ie EUR 15.6

See Part Three/Table 6, p. 157.

See Part Three/Table 7, p. 159. See Part Three/Table 8, p. 160. See Part Three/Table 9, p. 161.

(10) See Part Three/Table 19, p. 182 (and related comment in section 1.5). (11) See Part Three/Table 43, p. 231 (multiple choices: average 1.3 per respondent).

See Table A7/"Enhanced" Sample of the Statistical Appendix, p. 404 (77.0% was calculated out of the EUR 4.0

million, cited in the fourth group of data in this Table). million, cited in the first group of data in this Table).

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Survey respondents in the South declare relatively longer waits compared to the sample average, for specialist visits (up to 60 days), for small outpatient procedures (up to 30 days), and for diagnostic tests (even more than 120 days)².

As for the reactions of patients, 69.4% of those on the waiting list duly waited their turn: whether the wait was a short, medium or long one. The remaining 30.6% resorted to other behaviors, such as making use of the services of other public or accredited private facilities or (paid) *intramoenia* services at public hospitals or through private professionals.

Similar to the waiting lists for ASL services are those relating to access to hospital admissions (see the second part of Table 15). And in this regard, once again over the last twelve months, 8.0% of the Italian adult population, or 4.0 million people, experienced this type of wait: 6.2% on one occasion and a further 1.8% two or more times.

As regards the type of hospitals for which the wait for access occurred, public facilities were more involved, due to their greater number of admissions (66.0%, of which 38.2% for serious treatment and/or procedures and 27.8% for mild ones).

However, there were also waiting lists for access to accredited private hospitals in 18.3% of cases (of which 11.6% for serious treatment/procedures and 6.7% for mild ones), as well as for paid access to private clinics for 15.7% of the persons involved in the survey (of which 13.1% for serious treatment/procedures) and 2.6% for mild treatment and procedures).

As regard the wait for admission to hospital facilities, it can be seen that the longer waits (over 60 days and up to 120 days or more) relate to public facilities (15.0% for serious treatment/procedures, which increased to 22.3% for mild treatment and procedures), followed, with a decidedly lower incidence, by accredited private facilities.

If we then take into account the behaviors adopted by people who were on admissions waiting lists, we can see a reaction similar to the one referred to above with regard to the behavior for access to ASL services: in fact, even in the case of hospitals, 68.9% of respondents patiently waited their turn (69.4% for ASL services), compared to 31.1%, who resorted to other means (30.6% for ASL services).

In the latter case, people went to accredited private hospitals or other public hospitals with shorter waiting periods or, sometimes, even to facilities outside the Region. Use was also made of specialist *intramoenia* services (for a fee) within public hospitals, hoping to shorten the waiting time for

² See Table D15/"Enhanced" Sample of the Statistical Appendix, pp. 413-414.

admission to the hospital in which the trusted doctor was working, or else resorting to completely private facilities.

Finally, we tried to understand how many people may have experienced several types of waiting at the same time (see the last group of data in Table 15), a phenomenon that is anything but marginal. More precisely:

- there are cases of people who, having been placed on one or more waiting lists for ASL services, were also placed on those for access to hospital admission: this was true for 3.2 million people, or 20.3% of those who also had to wait their turn for local medical services (the multiplicity of experiences may have manifested itself with a different type of sequence: first for the ASL services and then for hospital admission or vice versa);
- and then there are also the opposite cases, concerning those subjects who, having had one or more experiences with waiting lists for hospital admission, have also had to wait for ASL services: this was true for 3.1 million people, or 77.0% of those who were placed on the waiting list for admissions (it is clear that also in this case the multiplicity of experiences may have occurred before or after hospital admission);
- and finally, there are the cases in which respondents had one or more experiences with waiting lists for ASL services and/or for hospital admission and also had one or more Emergency Room experiences: this was true for 36.7% of those who waited for ASL services (5.7 million people) and 44.0% of those who were waiting for hospital admission (1.8 million people).

Naturally, these values would further increase if we took into account the experiences not only with public hospitals but also with accredited private hospitals, and with private clinics (upon payment).

But having experiences (perhaps multiple) with excessively lengthy waiting lists can also lead to behaviors involving the postponement and/or forgoing of care as shown by the last group of data in Table 15. On the contrary, the aforementioned experiences constitute precisely the most important reason (and growing compared to 2017) for the postponing/forgoing phenomena: 1st place, with 51.7% in agreement, followed by financial difficulties (2nd place and no longer 1st as it was in 2017, with a lower intensity of responses equal to 30.0%), and then bureaucratic difficulties associated with access to services (3rd place, with 19.2%), the decrease in services (4th place, with 16.1%), and finally, the deterioration in quality of the services (5th place, with 13.1%).

2.2. A critical evaluation by one in three people

First of all, the opinions of relatively satisfied/dissatisfied expressed by the respondents were taken into consideration with respect to the health and social assistance services of their Region of residence, followed by the assessments in terms of improvement/deterioration of the ASL services and hospital admissions and finally the proposals for possible improvement of the management of waiting lists (see Table 16).

The positive opinions ("very + fairly satisfied"), expressed with respect to the health and social assistance services of the Region of residence, range from a maximum of 63.5% for the local health authorities, to 59.5% for public hospitals and 53.8% for accredited private hospitals, and finally, decreased to 36.5% for private clinics (upon payment).

If we then look at critical opinions ("slightly + not at all satisfied") the most problematic positioning concerns mainly public hospitals (with 32.6%), followed by local-health-authority services (28.6%) and, at a distance, services provided by accredited private hospitals (18.3%), and then, those by private clinics (upon payment) (14.3%).

If we then move from a "static" opinion to a "dynamic" opinion concerning the improvement/deterioration of territorial and hospital services by those who have had one or more experiences with them, we can see how:

- the positive opinions ("greatly + fairly improved") place the services of accredited private hospitals (50.9%) and those of private clinics (upon payment) (52.6%) in first place, while the ASL services fell below 50% (41.4% for the directly managed polyclinics and 47.7% for those affiliated), but above all the services for public hospitals seem to report the slightest improvements (37.2%);
- on the other hand, the negative opinions ("slightly + much worse") were 16.7% for public hospitals services and 15.7% for ASL services, while assessments concerning accredited private facilities were lower, whether for private centers affiliated with the local health authorities (7.8%), accredited private hospitals (11.9%) or the private clinics (upon payment) (7.1%).

Finally, we also wanted to get the opinion of the respondents about some proposals aimed at improving the management of waiting lists, again taking into account what was expressed by people who had actually had one or more experiences with them over the last twelve months and had consistently expressed an opinion of ("strongly + somewhat agree"). As can be seen from the data, most of the respondents' agree more than 80% of the time to proposals regarding:

Table 16 – Critical evaluations made, mostly, towards public health services by people who had one or more waiting list experiences in the last twelve months (% val.)

Val.)			
Phenomena		Data	
- Satisfied/dissatisfied opinion for the health and social assistance services of the Region of	Very + Quite	Slightly + Not at	I can't make a
residence by people who had a waiting list and/or Emergency Room experience ¹ :	satisfied	all satisfied	judgement
• Services of the ASL facilities (Polyclinics, etc.)	63.5	28.6	7.9
 Services of private centers affiliated with the ASL (Polyclinics, etc.) 	63.0	19.7	17.3
 Public hospital services 	59.5	32.6	7.9
 Services of accredited private hospitals 	53.8	18.3	27.9
 Paid private clinic services 	36.5	14.3	49.2
- Opinion regarding the improvement/deterioration of territorial services and hospital admis-	Groath, + Eairh,		Wighth: + Much
sions by people who had a waiting hist amoof emergency foom experience in the fast twelve months?:	improved	No change	Worse
• Services of the ASL facilities (Polyclinics, etc.)	41.4	39.5	15.7
 Services of private centers affiliated with the ASL (Polyclinics, etc.) 	47.7	41.8	7.8
 Public hospital services 	37.2	41.8	16.7
 Services of accredited private hospitals 	50.9	34.3	11.9
 Paid private clinic services 	52.6	34.1	7.1
Proposals to improve the management of waiting lists by respondents who actually had one or more experiences with them during the last turely months ("Strongly + somewhat arrea")			In accredited private
opinions) ³ :	nd uJ	In public hospitals	hospitals
 Increase the daily/weekly time for the use of technical equipment and the use of operators 		83.8	82.6
 Guarantee truly urgent services, with respect to the expected waiting times 		83.6	85.2
 Use other public hospitals in the area (within acceptable distances) to reduce waiting 		81.0	81.4
. Change the co-payment amount to better reflect the demand for services by patients			
(mandatory minimum co-pay charge of EUK 10/20 also from those who are presently exempt)		55.4	
(1) See Part Three/Table 17, p. 177.			

⁽²⁾ See Part Three/Table 18, p. 179.
(3) See Part Three/Table 11, p. 166.
Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

- to increase service hours and the daily/weekly time for the use of technical equipment and the use of operators;
- and to guarantee truly urgent services, with respect to the expected waiting times;
- and finally and this is a major theme to use other public hospitals in the area (within acceptable distances) to reduce waiting times;
- while there was less agreement, though certainly not marginal, with the proposal to increase co-payment charges in order to better reflect the demand for services by patients (53.4%).

It should also be added that the differences in the opinions expressed by people residing in the various geographical areas show less (slight) agreement in the Center-South compared to the rest of the country, while this agreement tends to increase for people residing in smaller towns, where the supply of services is obviously more limited, or for people with a medium or medium-high education level and social status³.

³ See Table D11/"Enhanced" Sample of the Statistical Appendix, p. 411.

3. A second "funnel" in the form of Emergency Room services

3.1. Access (even multiple) involving almost one in three adult citizens

Over the last twelve months, experiences with the Emergency Room in public hospitals (which provides the largest share of emergency services) involved 21.4% of the adult Italian population, which corresponds to 10.8 million people, who used this service one or more times (see the first data group of Table 17). To this large component is added the access made in accredited private hospitals (4.1%) and private clinics (3.2%), for a further 3.7 million people.

Therefore, there is a total of 14.5 million adults who have one or more Emergency Room experiences, though it should be stressed that the respondents may sometimes have also used hospitals other than public ones (though in modest percentages). This value is almost double compared to the 7.8 million hospital admissions annually¹. But to the 14.5 million adult subjects we must also add the estimate of minors who have also had one or more accesses to the Emergency Room on an annual basis (about 1.0 million units)², thus making 15.5 million people involved as patients. To these may added the carers, who may be more than conservatively estimated at in 10.3 million for

¹ Source: Ministry of Health, Year 2016 (latest available data, inclusive of all types and categories of admission).

² The incidence of access to the Pediatric Emergency Department was calculated on the total access to the Emergency Room which was equal to 8.5% (with reference to 2015, last year available), resulting in 1,232,000 units, rounded to 1 million, to take into account potentially multiple accesses.

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CCESS TO THE EMERGENCY ROOM	
Percentage incidence of people who actually had access to the Emergency Room one or more times on the total adult	
population, according to the type of hospital used:	
 Public hospitals (14.7% once and 6.7% two or more times) 	21.4 (10.8 millions)
• Accredited private hospitals (2.5% once and 1.6% two or more times)	4.1 (2.1 millions)
• (Upon payment) Private clinic (1.9% once and 1.3% two or more times)	3.2 (1.6 millions)
Reasons for latest access to the Emergency Room by the sub-sample of the population that had this experience?:	
■ Very serious reason	16.3
Fairly serious reason	44.3
• For "security" in relation to an apparently non-serious inconvenience	28.2
 Organizational in nature (did not know where to go, the general practitioner was unavailable, it was late, or ser- 	0 9
vices were not available on weekends, etc.)	6.0
Other	4.3
Total	100.0
Criteria for selecting the hospital in which the Emergency Room for the latest visit over the last twelve months ³ :	
The nearest hospital was chosen	70.4
 The most important hospital was chosen, even if not as close 	11.6
 Went to multiple hospitals because the wait was too long 	7.7
 Not possible to choose as it was decided by the 118 emergency service we used 	6.5
• Other	3.8
Total	100.0
How the patient made the latest access to the Emergency Room over the last twelve months ⁴	
 Accompanied by a family member or relative 	64.2
	11.8
	9.9
etc.)	0.5
Went there alone	15.8
• Other	1.3
Total	100.0

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(Continued) Table 17 – An experience had by almost 1/3 of the Italian adult population over the last 12 months (% val.)	oopulation over the last 12 months (%	val.)		
Phenomena			Data	
ACCESS TO THE EMERGENCY ROOM Code assigned on latest visit in the last twelve months ⁵ :				
• White				15.0
• Green				36.5
 Yellow 				27.6
 Red 				4.0
 Do not remember 				16.9
Total				100.0
 Person who assigned the Emergency Code when making latest access to the Emergency Room⁶ 	to the Emergency ${ m Room}^6$:			
 A doctor who briefly visited the person 				24.4
 A nurse who verified the need for Emergency Room access 				39.9
 A hospital employee who assigned the Code over the counter 				17.8
 Others 				8.0
 Do not remember 				17.1
Total				100.0
			To complete	To complete any additional
 Waiting time upon latest visit to the Emergency Room during the last twelve months?: 	twelve months7:	Before being visited	exams n	exams necessary
Up to 1 hour		50.9 1 70.3	26.0	0 25 (
 Over 1 hour and up to 3 hours 			29.8	5 22.0
 Over 3 hours and up to 5 hours 		$\frac{13.3}{2}$ 3 20.7	18.6	39.5
 Over 5 hours and over 10 hours (including night) 			20.9	2::0
 No additional exams were necessary Total 		100.0	4.7	
TAMI		It was possible	0001	
- Difficulties (if any) encountered in meeting needs upon latest visit to the Emergency Room ⁸ ;	he Emergency Room ⁸ :	tt was possible but difficult It wo	It was not possible	Total
■ Need to wash		32.1	29.0	61.1
Need to stretch out		19.1	21.0	40.3
 Need to drink/refresh oneself 		20.9	12.5	33.4
■ Need to use the toilet		14.2	5.0	19.2
■ Need to sit down		14.5	3.8	18.3
 Adequacy/inadequacy of information received while at the Emergency Room⁵ 	/ Room ⁹		Adequate	Not adequate
 Information on waiting times for visits 			50.1	49.9
 Diagnosis information 			77.2	22.8
 Information on the results of any laboratory tests, diagnostic tests, emergency visits and/or care 	, emergency visits and/or care		67.5	32.5
need for admission			48.5	51.5
(4)	See Part Three/Table 23, p. 189.		See Part Three/Table 27, p. 196.	
. (5)	See Part Three/Table 25, p. 191.		See Part Three/Table 30, p. 202.	
24, p. 190. (6)	See Part Three/Table 26, p. 193.	(9) See Part Th	ree/Table 32, p. 204.	
Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018				

adult patients³ and 1.0-2.0 million for persons aged under 18 years of age⁴, this would result in a total of 26.0-28.0 million adults who, over the course of a year have direct or indirect experience with Emergency Room services as carers (equal to 51.0-53.0% of Italian adult citizens or 44.0-46.0% of the entire Italian population). This explains, if only for the quantitative dimensions of the subjects involved, the importance of the ER experience for the life of citizens and for the perception of the services used by them (with the relative projection of this experience on the functioning or – if applicable – on the malfunction of the National Health Service).

As to the reasons for the latest access to the emergency room by the subsample of the population that actually had this experience, these go from reasons considered "very serious" (16.3%) to "fairly serious" (44.3%) and to those to ensure "safety" relating to an apparently non-serious inconvenience (28.2%), and finally, for organizational reasons as it was not known where to go, the general practitioner was not available, services were reduced at weekends, etc. (6.9%) (see second data group of Table 17).

If we then ask look at the criteria adopted for selecting the hospital in which the Emergency Room was located, it is quite logical to report how patients or their families chose the nearest facility (in 70.4% of cases), followed by the most important one, even if not as close, evidently for a sense of increased security for the patient (11.6%). It should not be overlooked that 7.7% of respondents claimed to have gone to multiple hospitals as the wait was too long in the first one they went to, to which is added 6.5% of respondents who made no choice at all since the emergency service (no. 118) identified the nearest hospital as can be seen in the third data group of Table 17.

It is also clear to see how the patient was brought to the Emergency Room, in a little less than 2/3 of the cases (64.2%), this was by a family member or relative, which is followed – in order of priority – by the 118 emergency service (11.8%).

But if we go from the phase of access to the stay in the Emergency Room, we can see how (see first two groups of data/second part of Table 17):

a) most of the Codes assigned were Green (36.5%), followed by Yellow (27.6%), then White (15.0%), and finally – naturally much less frequently – by Red (4.0%): moreover, it should also be noted that, for the overall average of the sample, the White and Green Codes were proportionally

³ Taking into account the Emergency Room survey in Part Three/Table 23, in which the respondents said they were accompanied by family, relatives, friends, work colleagues, in 70.8% of cases.

⁴ In this case the scenario, again conservatively, envisaged accompaniment by one adult (and thus equal to 1 million units) or two adults (2 million units).

assigned more to respondents with a medium and/or high level of education, while the Yellow and Red Codes refer to people with a more modest level of education, confirming the fact that the latter resort to the facilities for really more serious reasons, whereas the former appear to be more "worried", preferring to go directly to the Emergency Room even for milder inconveniences⁵:

b) and the assignment of the Emergency Action Code at the time of access passed through the "filter" of a doctor who actually visited the respondent (24.4%) or a nurse who in some way verified the needs of the patient (39.9%): but it should also be noted that in a few cases (17.8%) this happened through a hospital employee who assigned the Code over the counter.

Dealing with the Emergency Room also obviously means having to deal with waiting times, with the needs that the patient presents during such waiting and with any inadequacies of the information received during the time in the facility (see the last three data groups from the second part of Table 17). From this we can see how:

- a) the length of a wait before being visited was up to 1 hour in 50.9% of cases but rose up to 3 hours for 28.4% of respondents: but what is important to underline is that for 20.7% of the people involved in the survey the wait lasted over 3 hours and up to 5 hours (13.3%) and sometimes more than 5 or even more than 10 hours and, perhaps even the whole night (7.4%);
- b) often there is additional waiting (partly unavoidable) in order to carry out and complete any additional exams deemed necessary, with the consequence of an additional wait of up to 3 hours for 55.8% of the people, but even more than 3 hours for 39.5% (and up to 5 hours for 18.6%), but this could also increase to beyond 5 and up to more than 10 hours for a further 20.9% of respondents (the longest waits, i.e. those that exceeded 5 and went up to more than 10 hours were decidedly more pronounced for people living in the South compared to the rest of the country⁶);
- c) there were difficulties, more or less pronounced, regarding the satisfaction of the needs of the patients during the waiting period and this was true also for very simple needs: it was not possible, for example, to satisfy the need to wash (29.0% of cases), stretch out (21.0%), drink and refresh (12.5%), use the toilet (5.0%), or sit down (3.8%); but if these percentages are also added to those that represent the cases in which it was difficult to

⁵ See Table D25/"Enhanced" Sample of the Statistical Appendix, p. 419.

⁶ See Table D27/"Enhanced" Sample of the Statistical Appendix, p. 421.

satisfy these – even basic – needs, the aforementioned difficulties tend to double or even more as the last column of the fourth data group shows (second section of Table 17): 61.1% for the need to wash, 40.3% to be able to stretch, 33.4% to drink and refresh, 19.2% to use the toilet, and 18.3% to simply sit down (it should be remembered that the difficulty of satisfying these minimal needs is significantly more pronounced in the South compared to the rest of the country, while the absolute impossibility mainly concerns those interviewed in Central Italy and, in a more pronounced manner, those in the South⁷);

d) and also the information provided gradually to patients and to relative family members may have been only somewhat adequate: the most delicate point seems to be that of information about waiting times to be visited, information that was evaluated as not adequate by 49.9% of the respondents together with that concerning possible hospitalization needs (51.5%), followed by information on the results of any laboratory tests, diagnostic tests, emergency visits and/or care (32.5%), and finally, information on the diagnosis (22.8%): also in this case it should be emphasized that the inadequacies of the information referred to affect the South more in a more pronounced way than the rest of the country.

3.2. An opinion of dissatisfaction expressed by one person in four

The first three groups of data of Table 18 contain some opinions about experiences with the Emergency Room starting from those that specifically concern the services received, followed by the feeling of having been somewhat "the focus of attention" as patients and therefore from a more general opinion of satisfaction/dissatisfaction regarding the whole experience, but with reference not necessarily to the latest visit to an Emergency Room, but also to other occasions during the last twelve months.

With specific regard to the level of services received, an adequate (total or partial) opinion was returned in 73.2% of cases, while in the remainder (24.4%), the opinions were limited to "sufficient" (16.4%) and/or a decidedly unsatisfactory (8.0%), as shown in the first group of data in Table 18.

However, if we delve a bit deeper, and ask whether the patient felt that he/she was actually the "focus of attention", the opinions "drop" downwards, with positive responses among 61.0% of the respondents compare to 26.3%

⁷ See Table D30/"Enhanced" Sample of the Statistical Appendix, pp. 423-424.

⁸ See Table D32/"Enhanced" Sample of the Statistical Appendix, pp. 426-427.

that expressed a negative opinion, specifically regarding the public hospital system. The best opinions seems to be those regarding accredited private hospitals (74.0% of positive evaluations compared to 20.8% negative) and, on the contrary, the situation of private clinics seems even more critical, for which, however, the Emergency Room service was a marginal or contingent function (27.2% positive evaluations and 45.2% negative evaluations), as shown in the second data group of Table 18.

When respondents were asked about their level of satisfaction with regard to Emergency Room services, whether these were experienced not only on the latest visit but also several times in multiple hospitals over the last twelve months, the opinions that emerged substantially confirmed the earlier ones, in the sense that "very + quite satisfied" was true for 65.1% while 29.0% were dissatisfied.

In conclusion, therefore, one can see how on average one in four people (or a little more) of those who had one or more Emergency Room experiences expressed a critical opinion, albeit with all the nuances possible.

Regarding the satisfied/dissatisfied opinions, it is particularly important to bear in mind the various assessments provided, taking into account the territorial provenance of the respondents. And in this regard, Table 18 shows that those residing in the Center and South of Italy are relatively more penalized as regards:

- the adequacy of the services obtained after waiting at the Emergency Room: compared to an overall average of dissatisfaction ("sufficient + unsatisfactorily adequate") by 24.4%, the corresponding value increased to 36.0% for respondents of the South;
- as to whether or not they were the "focus of attention" as patients, limiting themselves to responses for public hospitals and accredited private hospitals (taking into account the limited absolute values of the answers obtained on private clinics): there were negative opinions from 26.3% of those interviewed for public hospitals, but 36.1% of those residing in the South; while the average of negative responses for accredited private hospitals was 20.8% but rose to 36.0% for respondents in Central Italy and 26.8% for those in Southern Italy9;
- and finally, the levels of dissatisfaction with the experiences of Emergency Room services in the last twelve months: they were 29.0% on average but rose to 37.9% for those interviewed in the South.

The second part of Table 18 takes into consideration the possible experiences of waiting lists for ASL services or access to hospitals by people who,

⁹ See Table D36/"Enhanced" Sample of the Statistical Appendix, pp. 428-429.

Table 18-4 critical evaluation by people who have resorted to the service in the last year, but also an "alternative" use of the Emergency Room (% val.)

Phenomena			Data			
EVALUATION OF SERVICES RECEIVED						
- Evaluations of the services obtained after the waiting experienced, the last time in the past twelve	North-	North-		South and		
months, at the Emergency Room!:	West	East	Center	Islands	Total	ĺ
A completely adequate service	51.9	55.6	46.3	28.7	43.2	73.7
A somewhat adequate service	28.9	26.7	32.1	31.4	30.0	7,67
A sufficient service	11.4	10.8	12.0	25.2	16.4	7 7 7
An unsatisfactory service	6.3	5.2	7.9	10.8	8.0	+,+7
 No evaluation because it was not used after too long a wait 	1.5	1.7	1.7	3.9	2.4	
Total	100.0	100.0	100.0	100.0	100.0	
- Feeling of having actually been the "focus of attention" as patients in the last experience in the past			Accredited private	vate		
twelve months at the Emergency Room ² :	Public h	Public hospitals	facilities		Private clinics	ics
 Was actually the "focus of attention" as a patient 	29.4	0 17 (0.71	13.0	0.40
 Was actually the "focus of attention" but only just a little 	31.6	6 01.0	43.4). T	~	7.
 Was not or almost not the "focus of attention" as a patient + 	15.2	26.3	17.0	0.00	^	45.0
 Was treated inappropriately, although we must take into account the crowded conditions, the long 	11.1	5 20.3	3.8 3.4	0.0	17.4 5 4	7: 2:
waits, etc.						
 I do not know how to evaluate this 	12.7		5.2		27.6	
Total	100.0		100.0		100.0	
- Satisfied/dissatisfied opinions following one or more experiences in the last twelve months with Emer-	North-	North-		South and		
	West	East	Center	Islands	Total	1
Very satisfied	9.5	16.0	7.9	7.0	9.5	1 22
Quite satisfied	63.6	58.4	53.1	49.6	55.6	1,00 {
Slightly satisfied	17.4	15.1	15.5	22.4	18.4	000
■ Not at all satisfied	5.1	4.9	14.6	15.5	10.6	3 29.0
■ I cannot express an opinion	4.4	9.9	8.9	5.5	5.9	
Total	100.0	100.0	100.0	100.0	100.0	

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(Continued) Table 18 – A critical evaluation by people who have resorted to the service in the last year, but also an "alternative" use of the Emergency Room (% val.)	alternative" use of the Emerger	ıcy Room (% val.)
Phenomena		Data
POSSIBLE DUPLICATE EXPERIENCES WITH THE EMERGENCY ROOM AND WAITING LISTS — Incidence % of people who, having had one or more Emergency Room experiences during the last weeke months, were also placed on waiting lists for ASI, services or for admission to hoseviral of which:		
Experiences with waiting lists for laboratory tests, diagnostic tests, specialist visits and/or small out-		52.2
patient procedures, of which:		(5.9 mil.) 25.7
. 2 experiences		16.7
 3 or more experiences Experiences with waiting lists for admission to hospital for treatment and/or surgical procedures, of 		9.8
which:		(1.9 mil.)
. I experience		12.9
. 2 experiences . 3 or more experiences		2.2
"ALTERNATIVE" USE OF THE EMERGENCY ROOM		Sub-sample population with
 Person whom the respondents would prefer to contact if there is a serious and/or urgent health problem, 	-	experience with waiting lists
taking into account their experience over time ⁵ :	Sample population	and/or the Emergency Koom
 When there is a real or perceived serious and/or urgent health problem, there is a preference to go to the primary care physician first 	70.6	74.8
 In the event that there is no adequate or quick response from the primary care physician or from ASL polyclinic specialists, it is preferable to go directly to the hospital Emergency Room. 	50.8	53.4
 Alternatively, it is preferable to go to a trusted or recommended hospital specialist for an intramoenia visit in the public hospital or a private visit (both for a fee), as this makes it easier to get exams, 	46.8	50.9
 diagnostic tests or even get hospital admission without waiting lists In the event a specialist visit, diagnostic exam, or hospital admission is needed and the waiting lists 	0	
are too long, it is preferable to go to the hospital Emergency Room.	26.8	7.07
 In any case, it is preferable to go immediately to the hospital Emergency Room rather than to ASL services so as not to waste time 	23.3	22.4
 Basically, there is a greater tendency to use the hospital than the ASL services present in the area 	20.8	21.0
 It is not possible to know what to choose, as it is usually recommended in case of need 	32.7	28.4
 There have not yet been any serious and/or urgent health problems to be addressed and thus it is impossible to state the choice 	28.1	22.9
(1) See Part Three/Table 28, p. 199 and Table D27/"Enhanced" Sample of the Statistical (4) See Part Three/Table 41A, p. 22. Appendix, p. 421. (5) See Part Three/Table 41, p. 22.	uble 41A, p. 224 (See also the couble 41, p. 221.	See Part Three/Table 41A, p. 224 (See also the comment relating to it in Section 2.7). See Part Three/Table 41, p. 221.

Appendix, p. 421. See Part Three/Table 36, p. 209. See Part Three/Table 37, p. 211 and Table D37/*Enhanced" Sample of the Statistical

Appendix, p. 430. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

in the last twelve months, also had experiences with the Emergency Room, furthermore, data on the use of "alternatives" are reported, with respect to the typical Emergency Room functions that people and users use this service for.

In the first case, it is possible to see how:

- 52.2% of those who have had one or more Emergency Room visits during the last twelve months also, during the same period, experienced waiting lists for ASL services: the subjects involved in these experiences numbered 5.9 million units:
- and also 25.7% of those who had access to the Emergency Room also had one or more experiences with waiting lists for hospital admission for treatment and/or surgical procedures: and was in this case a total of 1.9 million adult people.

Of course, the duplication of experiences just mentioned may have happened in different sequential order, in the sense that, after having been accepted in the Emergency Room, the patient could have been subsequently placed on a waiting list for some specific exams or diagnostic tests. Or, on the contrary, having had one or more experiences with waiting lists for access to a hospital, the individual may have then gone to the Emergency Room.

And it is precisely from observing this dual possibility of the respondents to weave experiences of waiting lists and Emergency Room that makes it interesting to examine the last group of data in Table 18, which shows the orientation of the population as a whole, on the one hand, and of that part of the population that has actually had an experience with waiting lists and/or the Emergency Room in the last twelve months, and on the other hand, about the "alternative" behaviors in the actual use of the Emergency Room.

As can be seen from the data presented, the presence of a serious and/or urgent health problem brought the primary care physician into play for 70.6% of the population, which rose to 74.8% for the aforementioned subsample. But, in the event that there is not an adequate or sufficiently rapid response from this professional or from specialists of the ASL polyclinics, there is a stated preference for the hospital Emergency Room, as attested to by 50.8% of the population and 53.4% of the indicated sub-sample.

There are two other ways that brought the Emergency Room in play as a sort of "accelerator" with respect to the times imposed by waiting lists: people would in fact go for a visit by the hospital specialist using the *intramoenia* services (for a fee) in a public hospital or make a private specialist visit (again paid) to then have exams or diagnostic tests run or even to be admitted to the hospital, thus avoiding waiting lists: this was the opinion 46.8% of the population, and up to 50.9% among those who had experiences with waiting lists and/or the Emergency Room.

And so it happens, even more simply and directly, by accessing the Emergency Room, being aware that perhaps a specialist visit, a diagnostic test, or hospitalization is needed, but using the Emergency Room service allows you to bypass excessively lengthy waiting lists: this statement is affirmed by just over 1 in 4 respondents from both the population and from the sample who had specific experiences with waiting lists or the Emergency Room in the last twelve months.

It is also interesting to verify that beyond the specific examples, there is a basic orientation that tends to explicitly underline the preference both by the population and by those who have experience in the field to immediately contact the Emergency Room more than ASL services simply so as not to waste time: 23.3% of the population and 22.4% of the indicated sub-sample. All of this comes to the point of affirming that "we tend to use the hospital more than the local-health-authority services in the area", with a convergence of essentially similar opinions (20.8% of the population and 21.0% of the sub-sample indicated in the second column).

It is interesting to note that the orientation towards the "alternative" choice of the Emergency Room transversely affects the respondents from the North, Center and South, who have experienced waiting lists and/or the Emergency Room, but with an accentuation of this orientation for respondents residing in the South and in the Islands, with regard to the second and third reasons indicated¹⁰:

- in the case in which there is not an adequate and/or rapid response from the primary care physician or ASL specialists (56.1% compared to an average of 53.4%);
- and in the case that it is decided to contact a trusted specialist (through an *intramoenia* visit or a paid private practice visit), for the purpose of carrying out exams, diagnostic tests or even obtaining hospital admission (56.4% in the South compared to an overall average of 50.9%).

3.3. The presence of difficulties related to distance and organization of the service

Before examining the answers of the respondents, it is appropriate to recall, in short, the framework of the offer of Emergency Room services in Italy, which is shown in Table 19. In the first part of the aforementioned table the number and types of this service present in the various Italian regions is

¹⁰ See Table D41/"Enhanced" Sample of the Statistical Appendix, p. 437.

shown. Overall, according to currently available data, there are 670 facilities, of which 11:

- 307 in the North (equal to 45.8%);
- 132 in Center (equal to 19.7%);
- and 231 in the South (equal to 34.5%).
 - Please note that the Emergency Room and Admission services perform:
- admissions activities for planned elective cases;
- admission activities for cases that occur spontaneously and are not of an emergency/urgent nature;
- admissions activities for subjects in urgent but deferrable condition;
- admissions activities for subjects in urgent and non-deferrable condition;
- admissions activities for subjects in emergency conditions;

These services provide diagnostic tests and any procedures necessary for the solution of the clinical problem presented. In the most complex cases, the procedures necessary to stabilize the patient and possible transport to a hospital that is able to provide specialized services are guaranteed under the coordination of an Operational Center¹².

The last column of Table 19 shows the regional ratio between the number of residents and the number of existing Emergency Room services, from which it can be noted that this ratio:

The Department of Emergency-Urgency and Admission (DEA)

The DEA represents a functional aggregation of operative units that maintain their autonomy and clinical assistance responsibility, but which recognize their interdependence by adopting a common code of behavioral assistance, in order to ensure, in connection with the facilities operating in the territory, a quick and complete response.

DEAs operate on two levels of complexity, based on the operating units that comprise them: DEA Level I and DEA Level II.

D.E.A. Level I

In addition to the services provided by the hospital Emergency Rooms, it also provides the functions of observation and short stays, intensive care and, at the same time, must provide general medicine diagnostic-therapeutic procedures, general surgery, orthopedics and traumatology, cardiology through the Intensive Cardiology Therapy Unit (UTIC). It also provides laboratory services of chemical-clinical and microbiological testing, diagnostic imaging, and transfusions.

D.E.A. Level II

In addition to the services provided by the DEA Level I, it provides the highest qualification emergency procedures, including heart surgery, neurosurgery, neonatal intensive care, vascular surgery, thoracic surgery, according to the indications established by regional planning.

Other particularly specialized components, such as large burn units, and spinal units that are part of regional planning, are placed in the Level II DEAs, thereby guaranteeing a balanced distribution throughout the country and a close relationship with the regional operations centers.

¹¹ Source: Ministry of Health (latest available data as of 30 December 2015).

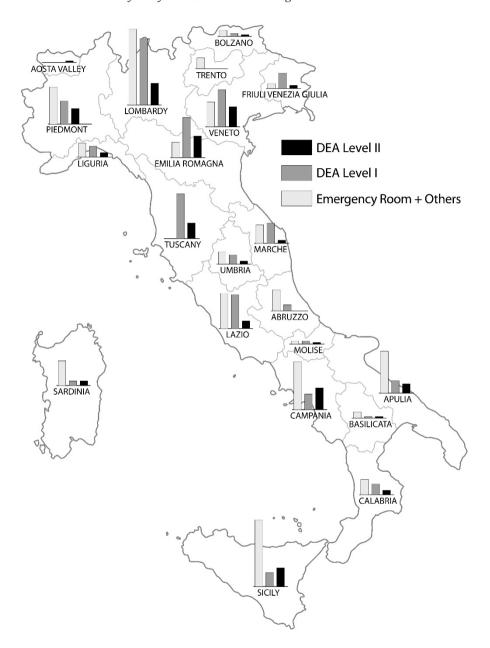
¹² Of course, not all Emergency Room services are the same, as is shown in Table 19/p. 69, since there are:

Table 19 – DEA Level I + DEA Level II + Emergency Room + Others, with evidence of the ratio, from the best to the worst, between resident population and total Emergency Room services by Region

Regions	Emergency Room + Others	DEA Level I	DEA Level II	Total	Of which: pediatric	Resident population Italy Total	Resident population Total ER + Others + DEA I + DEA 2
Umbria	8	9	2	16		891,181	55,699
Marche	12	13	2	27	I	1,543,752	57,176
Molise	2	2		v		312,027	62,405
Abruzzo	14	4		18	2	1,326,513	73,695
Autonomous Province of Bolzano	4	2		7	2	520,891	74,413
Sardinia	16	33	33	22	4	1,658,138	75,370
Autonomous Province of Trento	7			7	I	538,223	76,889
Sicily	43	6	12	64	5	5,074,261	79,285
Friuli Venezia Giulia	3	10	2	15	33	1,221,218	81,415
Liguria	6	7	3	19	5	1,571,053	82,687
Emilia Romagna	10	26	14	20	4	4,448,146	88,963
Piedmont	15	24	10	49	8	4,404,246	89,883
Veneto	16	24	13	53	3	4,915,123	92,738
Lombardy	49	43	14	106	35	10,008,349	94,418
Basilicata	4	-		9		573,694	95,616
Tuscany		29	10	39	4	3,744,398	96,010
Calabria	10	7	3	20	2	1,970,521	98,526
Apulia	27	∞	9	41	2	4,077,166	99,443
Campania	31	10	14	55	61	5,850,850	106,379
Lazio	23	22	5	20	5	5,888,472	117,769
Aosta Valley			_	-	I	127,329	127,329
North	113	136	28	307	9	27,754,578	90,406
Center	43	70	19	132	10	12,067,803	91,423
South and Islands	147	4	40	231	34	20,843,170	90,230
Total	303	250	117	029	106	60,665,551	90,546

Source: processing of Ministry of Health data (data on December 30, 2015)

Chart 1 – Distribution of E.R. facilities in the various Regions



Source: processing of Ministry of Health data (data on December 30, 2015)

- is more favorable starting from Umbria (55,699) up to the Province of Trento (76,889), also in relation to the geographical features that see a significant presence of mountains and a good and/or fair level of coverage;
- is located in the intermediate segment for the Regions ranging from Friuli Venezia Giulia (81,415) to Piedmont (89,883), which still remain below the national average and with a mixed presence of mountains/plains as well as with good coverage of services;
- and instead exceeds the national average (which is equal to 90,546) for the rest of the Regions considered – from Veneto (92,738) up to Valle d'Aosta which has only one Emergency Room (127,329) – which present a mixed geo-orographic conformation and has an extremely variable coverage of services.

Table 20 contains the opinions of respondents who had experiences with waiting lists and/or the Emergency Room in the last twelve months about the distance from the ER service, any difficulties in reaching it, as well as the existence, in addition to public hospitals, accredited private facilities that could offer a closer and therefore easier to reach service.

As to the distance between the public Emergency Room and the residence, it is possible to ascertain that almost 50% (48.8%) of the respondents (people who have had both Emergency Room and waiting list experiences in the last twelve months) acknowledge a very short travel time of no more than 15 minutes, while 37.2% say they take up to ½ hour, 10.5% more than ½ hour but less than an hour, and 3.5% an hour or more. Naturally, there are some territorial differences to be taken into consideration, given that the relatively best placed (with journeys of no more than ½ hour) are the respondents from the North and the Center of Italy. While for people living in the South, the longer times that go from more than ½ hour to 1 hour or more apply (see the first group of data in Table 20).

However, it is also true that there are Emergency Room services in accredited private hospitals that could (theoretically) be used to improve the distance difficulty: 21.6% of these services are located no more than 15 minutes away, 40.9% no more than ½ hour, and 37.5% are more distant than are the public hospitals.

Regarding the possible difficulties in access to Emergency Room services within the public hospital, almost 2/3 of the respondents (64.8%) admit that these exist and concern:

 mainly the physical distance from the house or the time it takes to reach the Emergency Room because of the difficult route, the presence of inadequate public services, the intensity of traffic, etc. (26.4% of cases);

Table 20 – Presence of public Emergency Room services in the area and possible difficulties in accessing and organizing them (% val)

			בחבר			
	Acomoditod		P_{u}	Public hospitals	sp.	
 Characteristics of Emergency Room services in the territory of the respondents by 	Accreattea	North-	North-	Center	South	Total
periences with waiting lists and/or the Emergency Room in	hospitals	West	East		and	
the last twelve months:					Islanas	
 A very short trip (up to 15 minutes) 	21.6	46.6	51.3	54.4	46.1	48.8
• A short trip (up to ½ hour)	40.9	39.7	39.2	32.8	36.5	37.2
• A medium trip (more than ½ hour but less than 1 hour)	18.4	11.5	8.3	8.5	12.0	10.5
 An hour or more 	19.1	2.2	1.2	4.3	5.4	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
			Pu	Public hospitals	SI	
 Potential difficulties encountered in accessing the Emergency Room services inside 		North-	North-	Center	South	Total
the public hospital most frequently referred to by the population that actually experi-		West	East		and	
enced waiting lists and/or the Emergency Room in the last twelve months ² :					Islands	
 There are difficulties 		62.7	8.99	68.5	69.1	8.49
 There are no difficulties 		25.8	30.9	18.2	20.9	23.7
I don't know		11.5	12.3	13.3	10.0	11.5
Total		100.0	100.0	100.0	100.0	100.0
- Detail of the difficulties (average 1.3 per respondent) ³ :						
 The Emergency Room is far from home or in any case requires significant time to get to (this to traffic, difficult route, or inadequate transportation services) 		25.9	26.1	18.7	31.9	26.4
The Emergency Room is farther away than it used to be, since it was transferred		1,5	7			0.31
to a larger but farther hospital		13.3	1. 4.	13.2	1/./	0.61
 The Emergency Room transferred to the larger hospital has a larger population 		57.0	53.9	0.4	42.1	48.7
pool and therefore waiting times have increased						
 The Emergency Room has not been adequately reorganized to deal with a greater number of patients 		22.8	24.2	30.6	23.8	25.0
 Many people use the ER due to the inadequacies of the ASL facility services, in 						
order to shorten waiting times for special visits, for diagnostic tests, or even for		29.1	31.0	21.9	27.7	27.4
nospitai admissions.						

(Continued) Table 20 - Presence of public Emergency Room services in the area and possible difficulties in accessing and organizing them (% val)

henomend		Data			
Existence, in addition to public hospitals, of accredited private hospitals that offer a		Pui	Public hospitals	S	
closer and therefore easier to reach Emergency Room Service, according to the re-	North-	North-	Vorth- North- Center South	South	Total
sponses of those who actually experienced the Emergency Room and/or waiting lists	West	East		and	
in the last twelve months ⁴ :				Islands	
 They exist, but do not have an Emergency Room 	13.0	15.4	14.8	19.5	15.9
 They exist, but do not have adequate equipment for more serious cases 	22.0	10.7	18.7	19.9	18.6
 They do not exist 	24.3	32.0	26.4	19.8	24.8
 I am unable to give an opinion 	40.7	41.9	40.1	40.8	40.7
Total	100.0	100.0	100.0	100.0	100.0

See Part Three/Table 38, p. 213 and Table D38/"Enhanced" Sample of the Statistical Appendix, p. 431

See Part Three/Table 39, p. 214 and Table D39.1/"Enhanced" Sample of the Statistical Appendix, p. 432

See Part Three/Table 39, p. 214 and Table D39.2/"Enhanced" Sample of the Statistical Appendix (multiple choices), p. 435. (2) See Part Three/Table 39, p. 214 and Table D39.1/"Enhanced" Sample of the Statistical Appendix (multi (3) See Part Three/Table 39, p. 214 and Table D39.2/"Enhanced" Sample of the Statistical Appendix (multi (4) See Part Three/Table 40, p. 217 and Table D40/"Enhanced" Sample of the Statistical Appendix, p. 436. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

- potential reorganization processes of public Emergency Rooms, which today may be farther away than in the past due to being transferred from the original hospital to another of greater size but which is further away (15.0% agreement); not to mention that an Emergency Room moved to a larger hospital usually has a larger population pool and therefore the waiting time for the service ends up being inevitably longer (48.7%) and this is even more so if this ER was not adequately reorganized to address an increase in the number of patients (25.0%);
- and finally, the fact that many people make use of the Emergency Room because of the inadequacies of the ASL facility services, in order to shorten the waiting time for specialist visits, diagnostic tests or even to be able to gain admission more quickly (27.4%): confirming with what was explained at the end of the previous section about the behaviors of the population towards "alternative" use of the Emergency Room.

But are there, in addition to public hospitals, also accredited private hospitals that might offer an easier to reach Emergency Room service? Respondents to this question specify that:

- accredited private hospitals exist, but they do not have Emergency Rooms, at least at present (15.9%): but perhaps the opportunity for their entry into operation should be evaluated;
- they exist but the respondents believe that they do not have adequate equipment for more serious cases (18.6%): these services could perhaps be used (or transformed) with reference to patients not affected by serious emergencies;
- they do not exist at all, given the information available to the persons involved in the survey (in 24.8% of cases);
- finally, it must also be said that, as is understandable, 40.7% are not sufficiently informed to express an opinion on the topic.

These assessments, corresponding to the territorial affiliation of the respondents, show that there are in fact accredited private hospitals but that they do not have an Emergency Room, especially in the South (19.5%) compared to the North-West, the North-East and the Center of Italy (13.0%, 15.4%, and 14.8%, respectively). And that, though they do exist, in the opinion of the respondents they do not have adequate equipment for the more serious cases, especially in the North-West (for 22.0% of respondents) and in the South (19.9%), compared to 10.7 % in the North-East, and 18.7% in Central Italy.

4. A measurement of the efficiency of the system through an examination of the financial statements of the hospital centers

4.1. Monitoring of the "anomalies" that suggest possible implicit financial statement covering

For many years now, this Report has examined the data of the Income Statements of the public Hospital Centers in order to make the reporting of the relative activities they perform more transparent and understandable, just as – and not starting today – current legislation requires¹.

When speaking of transparency, three particularly significant contextual situations should be mentioned regarding a specific item in the Income Statement of the Hospital Centers, concerning the so-called "by-function" activities.

The first situation concerns the two Stability Laws relating to the 2015 and 2016 fiscal years, within which limits were set (with rescheduling objectives to be pursued compulsorily and with potential related sanctions) regarding the difference between costs and revenues linked to the remuneration of the activity (mainly health care and social-health care services related to health care, co-payment charges and contributions for services falling outside of those required for basic levels of assistance (LEA, Livelli Essenziali di Assistenza) with reference to the yearly Income Statements. This maximum deviation was established in the 2015 Stability Law at 10% of revenues and/or equal to or greater than EUR 10 million (and this provision was already applied for the 2016 fiscal year for the Hospital Centers and starting in 2017 for directly managed Hospitals). But this limit was subsequently lowered by the 2016 Stability Law to 7% and, in absolute terms, to EUR 7 million or more (and the new provision already needed to be applied in 2017).

¹ For more on this, please refer to what has been described in Part One/Section 4.2 ("Transparency and certifiability of financial statements is still too slow") in the "Health&Hospitals/2017" Report.

The objective was evidently to promote appropriate actions by the Hospital Centers (and subsequently by the directly managed Hospitals) so that any excessive deviations from those envisaged by the aforementioned provisions would be detected.

The second contextual situation, one that in fact concerns the "by-function" activities, relates to the Ministerial Decree implementing Art. 1, paragraph 526, of the 2016 Stability Law on the basis of Art. 8-sexies of Legislative Decree 502/1992 and subsequent amendments, which had already introduced the possibility of recognizing a further "enhanced" lump-sum valuation for the aforementioned activities on the 2016 Financial Statements of the Hospital Centers², up to a maximum of 30% of the revenues received from health services, co-payment charges and services outside of basic levels of assistance (though this last item has negligible values). This valuation was to be calculated not on the basis of the aforementioned revenues as they were shown in the Income Statement, but rather on the basis of an amount that was in fact even greater, being determined by means of a special formula³ that made it possible to include higher Revenue sizes. It is self-evident that the

- programs that strongly integrate hospital and community care, health and social care, with special reference to lengthy or recurrent chronic illnesses;
- assistance programs with a high degree of customization of the service or the service rendered to the person;
- activities carried out by participating in prevention programs;
- assistance programs for rare diseases:
- activities with significant waiting costs, including the First Aid and emergency transport system;
- experimental assistance programs;
- organ, bone marrow and tissue transplant programs, including maintenance and monitoring of the donor, the removal of organs, transport activities, coordination and organization of the network of removal and transplants, and preliminary testing on donors.
- ³ In the event of a maximum increase equal to 30% of "by-function" activities, the formula is as follows:

Revenues from healthcare and health-related social health services
+ Co-payment charges + Extra basic levels of assistance
contributions x 30%
70%

Naturally, if the percentage is less than 30% for the denominator of the formula, the difference to 100 of the aforementioned percentage must be shown.

² The Ministerial Decree implementing Art. 1, paragraph 526 of the 2016 Stability Law, on the basis of Art. 8-sexies of Legislative Decree 502/1992 and subsequent amendments, stated that "the total value of the remuneration of the "by-function" activities cannot in any case exceed 30% of the remuneration limit already assigned". Among other things, the 2016 Financial Statements of the Hospital Centers had to incorporate this provision, while the directly managed Hospitals should have incorporated it starting from the 2017 fiscal year. More information is available by looking at the large categories of "by-function" activities included in Legislative Decree 502/1992. These are:

entry into force of such a flat-rate valuation tool for "by-function" activities helps to bring the results of the Income Statement of the Hospital Centers closer to balance between costs and revenues.

The third contextually significant situation has to do with the establishment of a special Commission at the Ministry of Health, which was tasked with defining the maximum criteria for the allocation of the percentages of flat-rate recognition of the value of the "by-function" activities in order to take into account services actually performed corresponding to the activities by the individual Hospital Centers: the objective was to practically modulate the provision that stated "up to a maximum of 30%" but which could also be 25%, 20%, or indeed another percentage, without prejudice to the fact that the concrete application of these criteria must/should fall under the individual Regional Health Services. In the meantime, however, the work of the aforementioned Commission was already halted during 2016, thereby allowing complete discretionary application of a greater lump sum value for "byfunction" activities (i.e. "up to 30%" as per the legal provision). This has made approaching the Cost/Revenue equilibrium objectives that had inspired the legislation contained within the two Stability Laws mentioned above a little easier.

At this point it is worth reiterating the reasons that were (and are) at the basis of the examination of the Income Statement data by this Report. These are:

- on the one hand, that aimed at improving the transparency and comparability of the financial statements, at least of the Hospital Centers, beyond any "upward" adjustments of the Revenue on the final balance sheet: thus distinguishing more efficient management situations from less efficient ones while taking into account the different contextual conditions present in the multiple and varied territorial realities of the Country;
- and on the other hand, that of identifying any areas of potential inefficiency by means of examining the items on the Income Statement, which end up "consuming" rather than "freeing up" financial resources that should instead be invested in restructuring and reorganizing services in order to make management more efficient and better satisfy patients.

Without prejudice to what has been mentioned so far, again this year the assessment of the Income Statements was undertaken as follows:

1) first of all, the Income Statements of 34 out of 44 Hospital Centers and University Hospital Centers that are similar were taken into consideration.

Please note that in 2016 (latest available data) the overall situation in Italy was as follows:

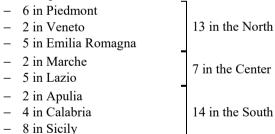
Hospital Centers: 57 units

University Hospital Centers: 18 unitsTotal: 75 units

But of the 57 Hospital Centers, 29 former Hospital Centers in Lombardy had to be removed, given that a regional reform came into force placing some territorial services within the Centers. Consequently it was not possible to operate on a set of Hospital Centers that were consistent with one another (that is, concentrated on hospital-type activities), to which was added the fact that some other unification of territorial services was also implemented by one Hospital Center in the Friuli Venezia Giulia Region and a Center in the Sardinia Region. And thus, the total of 46 Hospitals mentioned above falls further by a couple of units, to a total of 44 units. Consequently, the 34 Hospital Centers and University Hospital Centers examined this year represent 77% of those possible to compare.

Moreover, during the year 2017, two Hospital Centers in Emilia Romagna were also involved in similar operations, but in this case it was decided to leave the two aforementioned Centers within the group of 34 examined for this Report: assuming for the first of these (H.C. no. 10) that the 2016 values could also be considered valid for 2017, due to the relative "stability" of the various Revenue and Cost items in the previous four-year period. Whereas for the second of these (H.C. no. 11), the costs were split between the Hospital Center and a Local Health Authority (AUSL) in a particular way, with the consequence of having obtained slightly "irregular" values. Moreover, all this has been appropriately referred to in Table Appendix 1, which shows the absolute values of the items of the Income Statements of the Hospital Centers taken into consideration⁴.

The Hospital Centers examined are in the following Regions:



However, it can be reasonably stated that, as a whole, the sample of Hospital Centers assessed for this Report is in any case more than satisfactory and, above all, makes it possible to analyze the trend of the so-called "anomalies" already highlighted last year;

⁴ See Appendices/Chapter 1, p. 325 et seq.

- 2) the next step was that of identifying the aforementioned trend by using the Index Numbers that refer to five and no more than four years of Income Statements of the Hospital Centers, as was done in the previous Report: which permitted greater data monitoring with respect to the situation analyzed for the year 2016. The items of the Income Statement and the relative trend are again those shown below⁵:
 - the trend of the number of in-hospital stays compared to the trend of revenues from healthcare services (see Table 21);
 - the trend in the number of in-hospital stays and the trend in costs for the purchase of goods and services (see Table 22);
 - the trend in revenues from "by-function" activities and the trend in the percentage of these activities on revenues from services + revenues from co-payment charges as well as the comparison with the percentage of the same "by-function" activities, calculated on the basis of the mechanism envisaged by the mentioned Ministerial Decree (see Table 23);
 - and finally, the performance of the results for the fiscal year, with reference to the five years examined and their impact on revenues from services + co-payment charges (see Table 24);

If we consider the first of the tables, the one relating to the comparison between the trend of in-hospital stays and the trend of revenues from corresponding health services in the five year period (see Table 21), the Index Numbers shown highlight the following phenomena:

a) a manifesting decrease in the number of in-hospital stays, that go from 100.0 (I.N. 2013) to 93.7 (I.N. 2017), for all the Hospital Centers considered. But despite this decrease, there was, on the contrary, an increase in revenues from health and social-health services, which rose from 100.0 in 2013 to 108.1 in 2017: the difference between the Index Numbers for revenues and Index Numbers for in-hospital stays in 2017 is an average of 14.4 points for all the Hospital Centers, thus confirming the trend already highlighted in 2016 (when this difference, over the previous four years, was 12.0 points).

⁵ The tables below were prepared starting from the absolute figures present in the 2017 Income Statements of the 34 aforementioned Hospital Centers, of which individual Balance Sheet Reports were used as an information source (see Table Appendix 1 in Chapter 1 of the Appendices).

Table 21 – Comparison of trends for in-hospital stays and corresponding revenues in the four years considered (LN.: 2013 = 100.0)	r ın-hospu	tai stays ar	a corresp	onaing re	enues in i	ne Jour ye	ars consia	erea (1.N	$2013 \equiv I$	00.00		
	Numb	Number of impatient admissions and day-	tient adm	issions an	d day-	Reve	Revenues from healthcare services and	healthca	re service	s and	Index Number difference between Revenues	ce between Revenues
Hospital Centers		hospi	hospital admissions	sions			nearth-related Social nearth Services as per the IS (Cod. A0320)	the IS (Cod. A0320)	II services 1320)	as ber	Aliu Auliissiolis	IISSIOIIS
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	In 2016	In 2017
H.C. 1	0.001	95.1	9.88	87.3	6.98	100.0	7.76	101.0	101.8	100.1	14.5	13.2
H.C. 2	0.001	9.96	111.6	9.76	112.4	100.0	100.8	104.9	106.3	107.9	8.7	-4.5
H.C. 3	0.001	8.56	8.56	95.3	8.46	100.0	8.96	100.2	102.8	103.9	7.5	9.1
H.C. 4	0.001	5.96	98.5	98.3	8.76	100.0	6.96	100.7	105.6	107.5	7.3	6.7
H.C. 5	0.001	95.3	98.3	90.1	98.2	100.0	94.9	94.9	8.86	102.8	8.7	4.6
H.C. 6	0.001	84.1	95.0	94.7	94.3	100.0	6.76	100.3	6.66	5.66	5.2	5.2
Piedmont Total	0.001	2.06	97.4	94.5	8.96	100.0	97.7	100.5	102.0	102.6	7.5	5.8
H.C. 7	0.001	9.86	107.6	105.4	110.7	100.0	0.86	99.3	8.66	105.1	-5.6	-5.6
H.C. 8	0.001	100.9	115.1	125.3	124.7	100.0	101.9	108.7	112.4	116.2	-12.9	-8.5
Veneto total	0.001	8.66	111.3	115.2	9711	100.0	6.66	103.9	105.9	110.5	-9.3	-7.I
H.C. 9	0.001	6'86	0.66	98.4	103.1	100.0	102.0	103.4	104.1	104.3	5.7	1.2
H.C. 10	0.001	L'. L6	2.96	0.96	0.96	100.0	100.7	101.0	9.101	9.101	5.6	5.6
H.C. 11	0.001	2.96	95.5	94.0	123.2	100.0	2.66	8.66	99.4	157.3	5.4	34.1
H.C. 12	0.001	6.76	97.2	98.4	6.76	100.0	101.0	101.6	104.1	106.8	5.7	8.9
H.C. 13	0.001	8.86	6.76	96.3	95.8	100.0	101.9	102.3	101.8	104.5	5.5	8.7
Emilia Romagna Total	0.001	0.86	97.3	97.0	102.2	100.0	I0I.I	101.7	102.6	112.7	5.6	10.5
NORTH ITALY TOTAL	0.001	95.4	100.0	99.4	102.9	100.0	9.66	101.8	103.1	108.4	3.7	5.5
H.C. 14	0.001	66.3	94.2	92.1	91.6	100.0	95.4	93.1	95.8	106.0	3.7	14.4
H.C. 15	0.001	97.4	93.6	93.8	93.3	100.0	93.6	92.6	9.76	101.2	3.8	7.9
Marche Total	0.001	1.86	93.8	93.2	92.7	100.0	94.2	92.8	96.9	102.9	3.7	10.2
H.C. 16	0.001	9.96	78.0	69.7	77.8	100.0	7.86	6.96	92.7	92.9	23.0	15.1
H.C. 17	0.001	91.2	0.98	77.7	77.3	100.0	93.2	106.1	103.3	103.4	25.6	26.1
H.C. 18	100.0	93.7	80.1	74.7	74.3	100.0	95.8	98.9	99.3	101.9	24.6	27.6
H.C. 19	100.0	97.9	83.9	77.9	77.5	100.0	100.1	103.6	106.2	112.1	28.3	34.6
H.C. 20	100.0	102.6	90.4	86.1	69.4	100.0	104.9	111.6	114.4	118.3	28.3	48.9
Lazio Total	0.001	96.2	82.6	76.2	75.I	100.0	98.3	102.0	101.7	104.0	25.5	28.9
CENTRAL ITALY TOTAL	100.0	2.96	85.7	80.9	6.62	100.0	97.1	99.2	100.3	103.7	19.4	23.8

(Continued) Table 21 - Comparison of trends for in-hospital stays and corresponding revenues in the four years considered (I.N.: 2013 = 100.0)

	, _	9				Domon	the from	hoolthoo	Dominion from hoolth come commission	buo.	Index Number differen	Index Mumber difference between December
Hospital Centers	Numbe	r of impa hosp	impatient admission hospital admissions	Number of impatient admissions and day- hospital admissions	nd day-	health-	related so the IS	ted social health serviced the IS (Cod. A 0320)	nevenues from nearmeare services and health-related social health services as per the IS (Cod. A0320)	as per	and Adı	unierence between Kevenues and Admissions
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	In 2016	In 2017
H.C. 21	100.0	95.0	89.3	88.8	88.4	100.0	6.101	105.9	99.5	94.4	10.7	6.0
H.C. 22	100.0	93.3	89.2	88.4	88.0	100.0	100.0	105.8	0.66	104.5	10.6	16.5
Apulia total	100.0	94.4	89.3	88.7	88.2	100.0	101.2	105.9	8.66	0.86	10.6	8.6
H.C. 23	100.0	94.2	97.6	100.2	2.66	100.0	99.1	9.86	119.7	120.6	19.5	20.9
H.C. 24	100.0	95.2	94.3	6.88	88.5	100.0	100.2	100.4	8.901	116.4	17.9	27.9
H.C. 25	100.0	95.4	8.56	9.56	95.2	100.0	100.4	119.8	130.8	162.0	35.2	8.99
H.C. 26	100.0	94.0	92.1	2.98	86.3	100.0	0.66	0.86	9.601	118.4	22.9	32.1
Calabria Total	100.0	94.6	93.3	92.4	92.0	100.0	9.66	101.3	114.2	123.3	21.8	31.3
H.C. 27	100.0	83.4	6.87	85.3	82.3	100.0	6.36	102.9	102.9	111.5	17.6	29.2
H.C. 28	100.0	84.2	2.08	94.4	63.6	100.0	97.2	105.1	113.9	113.7	19.5	19.8
H.C. 29	100.0	87.2	84.9	94.1	93.7	100.0	9.001	110.6	113.6	111.6	19.5	17.9
H.C. 30	100.0	83.0	76.4	84.9	84.5	100.0	6.56	5.66	102.5	66.5	17.6	15.0
H.C. 31	100.0	90.1	9.68	102.8	102.3	100.0	104.0	116.7	124.1	122.6	21.3	20.3
H.C. 32	100.0	85.0	8.08	9.87	78.2	100.0	98.2	105.3	110.4	110.6	31.8	32.4
H.C. 33	100.0	86.1	76.5	0.88	9.78	100.0	5.66	2.66	106.2	103.7	18.2	16.1
H.C. 34	100.0	86.5	89.3	113.7	113.2	100.0	6.66	116.3	137.1	127.8	23.4	14.6
Sicily Total	100.0	85.8	82.2	92.5	8.16	100.0	I.66	I07.1	113.8	112.5	21.3	20.7
SOUTH ITALY TOTAL	100.0	868	86.2	91.5	90.9	100.0	7.66	105.8	110.4	110.8	18.9	19.9
OVERALL TOTAL	100.0	93.7	92.0	97.6	93.7	100.0	99.1	102.4	104.6	108.1	12.0	14.4

Source: survey by Ermeneia - Studi & Strategie di Sistema, 2018

If in-hospital stays decrease and revenues from health care and non-health care services increase at the same time, it is possible that here is a first "anomaly". Naturally, the interpretation cannot be limited to a statistical observation. It should in fact be taken into account that the decrease in inhospital stays is a process that has been underway for some time, following the decision to reduce hospitalization, which should be increasingly used for qualified services, while the rest of the demand should seek responses outside the hospital;

- b) but this last statement is not enough to explain the entirety of the phenomenon, especially if we look at what happens in the Hospital Centers of the North rather than in the Center or in the South. In fact, the difference in terms of Index Numbers for revenues, on the one hand, and for in-hospital stays, on the other hand, in the period 2013-2017 turns out to be:
 - 5.5 points higher in the North, even considering some values greater than 9 points and up to 13.2 points in Piedmont, slightly less than 9 points in two H.C.s in Emilia Romagna, whereas the differences are less in two others (but we are not considering Hospital Center no. 11 for the reasons already explained in the notes to Table App. 1 in the Appendices): a special case can be seen then in the two Hospital Centers in Veneto, which while representing situations characterized by high quality services have probably made a significant effort to improve the efficiency of operation, given that in the five-year period the number of in-hospital stays has increased much more than revenues have increased;
 - and 23.8 points in the Centers of Central Italy, but with macroscopic differences above 20 and even 30-40 points for Lazio, while those relative to the Marche are smaller;
 - and 19.9 points in the South, which can however exceed 30 points (up to 66.8 points in a Calabrian Hospital Center).

It is clear that the significant difference between the trend of revenues from health and social-health services tends to rise, especially in the Southern Regions, and the trend of in-hospital stays tends to fall. In the South this cannot fail to make one think of the presence of a very probable "anomaly", unless we are to assume a pronounced and generalized increase in high quality services provided by the Hospital Centers, in particular in Calabria and Sicily.

If we compare the trend in the number of in-hospital stays in the five-year period and the trend in the same period of the cost for the purchase of goods and services (see Table 22), a further "possible anomaly" again emerges. In fact:

- a) there is again a divergence between the increase in the cost for the purchase of goods and services, on the one hand, and a parallel decrease in the number of in-hospital stays, on the other hand, similarly to what was observed in Table 21 above. The first increase in the five-year period (again in terms of Index Numbers), from 100.0 to 117.9 for all the Hospital Centers examined, while the number of in-hospital stays drops in the period 2013-2017 from 100.0 to 93.7 (see Table 22). This represents a total difference of 24.2 points, an even higher value compared to the 14.4 points of the comparison between revenues from health services and numbers for in-hospital stays, as per Table 21 above;
- b) but also in this case it is important to account for the differences in the Index Numbers between those relating to the costs for the purchase of goods and services and those relating to the number of in-hospital stays in the various Italian institutions, given that:
 - this difference is limited to 20.1 points for the Hospital Centers in the North, with an emphasis especially on some Hospital Centers in Emilia Romagna and Piedmont;
 - it is 30.0 points for the Hospital Centers in Central Italy, both for the Marche region and, above all, in Lazio, which a difference in excess of 40 points can be seen in a couple of cases;
 - and it is 25.8 points for the South, and in many cases rising to over 40 points or more for two Hospital Centers in Calabria, and for three in Sicily.

Even the comparison of the number of in-hospital stays/purchases of goods and services, therefore, contains items that might present some "anomaly", especially for some Hospital Centers and/or for some regional entities. Unless it is to be assumed – though it seems to be unacceptable assumption in principle – that the levels of hospital services have risen so much that they have entailed a strong and general increase in costs for the purchase of goods and services: moreover, this increase is concentrated in particular in the years 2015 and 2016, and more or less for all the Hospital Centers, giving a confirmation of the attempt to recover any loss on the rebalanced Budget, in whole or in part, through the item of cost for the purchase of goods and services.

Subsequently the third type of comparison was carried out, as is illustrated by the data contained in Table 23 below. It considers a particular entry in the Income Statement, that of revenues conceded to the Hospital Centers for the performance of so-called "by-function" activities, for which the percentage out of the revenues from healthcare services + revenues from copayment charges has also been calculated, as it appears from the Income Statement.

Table 22 – Comparison of trends fo	or the num	er of in-he	ospital sta	vs and cos	s for the p	nrchase c	goods ar	id services	in the fou	r years co.	mds for the number of in-hospital stays and costs for the purchase of goods and services in the four years considered (I.N.: 2013 = 100.0)	9.0)
	Numb	Number of impatient admissions and day-	tient adm	issions an	d day-	Cost for	the Purc	hase of G	Cost for the Purchase of Goods and services	services	Index Number difference between costs for the Purchase of Goods and services, and	ice between costs for is and services, and
Hospital Centers		ıdsou	nospital admissions	sions)	(Cod. BAU10)	0)		admissions	ions
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	In 2016	In 2017
H.C. 1	100.0	95.1	9.88	87.3	6.98	100.0	1.66	110.8	119.1	123.4	31.8	36.5
H.C. 2	100.0	9.96	111.6	9.76	112.4	100.0	105.4	120.5	123.8	127.8	26.2	15.4
H.C. 3	100.0	8.56	8.56	95.3	94.8	100.0	7.66	105.0	110.5	112.3	15.2	17.5
H.C. 4	100.0	5'96	98.5	98.3	8.76	100.0	1.26	100.9	113.0	116.6	14.7	18.8
H.C. 5	100.0	95.3	98.3	90.1	98.2	100.0	8:56	102.5	9.901	113.4	16.5	15.2
H.C. 6	100.0	84.1	95.0	94.7	94.3	100.0	8'96	106.3	6.501	109.3	11.2	15.0
Piedmont Total	0.001	2.06	97.4	94.5	8.96	100.0	I.86	107.5	6.011	114.6	16.4	17.8
H.C. 7	100.0	9.86	107.6	105.4	110.7	100.0	6.96	1.601	107.1	112.3	1.7	1.6
H.C. 8	100.0	6.001	115.1	125.3	124.7	100.0	1.501	126.3	124.8	134.8	-0.5	10.1
Veneto total	100.0	8.66	111.3	115.2	9711	0.001	0.001	116.4	114.6	121.8	9.0-	4.2
H.C. 9	100.0	6'86	0.66	98.4	103.1	100.0	5.701	103.5	111.0	118.0	12.6	14.9
H.C. 10	100.0	L'L6	2.96	0.96	0.96	100.0	101.2	101.7	8.701	107.8	11.8	11.8
H.C. 11	100.0	2.96	95.5	94.0	123.2	100.0	103.7	110.9	114.2	192.9	20.2	2.69
H.C. 12	100.0	6.76	97.2	98.4	6.76	100.0	105.7	136.6	128.6	139.1	30.2	41.2
H.C. 13	100.0	8.86	6.76	96.3	95.8	100.0	102.8	118.5	113.6	118.7	17.3	22.9
Emilia Romagna Total	100.0	0.86	97.3	97.0	102.2	100.0	104.8	117.9	117.4	134.6	20.4	32.4
NORTH ITALY TOTAL	100.0	95.4	100.0	99.4	102.9	100.0	100.8	113.3	114.0	123.0	14.6	20.1
H.C. 14	100.0	8.66	94.2	92.1	91.6	100.0	103.2	107.9	110.3	123.3	18.2	31.7
H.C. 15	100.0	4.76	93.6	93.8	93.3	100.0	9.601	116.7	114.7	120.2	20.9	26.9
Marche Total	100.0	I.86	93.8	93.2	92.7	100.0	103.4	113.8	113.2	121.2	20.0	28.5
H.C. 16	100.0	9.96	78.0	69.7	77.8	100.0	100.9	6.86	95.2	87.1	25.5	9.3
H.C. 17	100.0	91.2	0.98	7.7.7	77.3	100.0	1.86	110.6	116.1	122.0	38.4	44.7
H.C. 18	100.0	93.7	80.1	74.7	74.3	100.0	98.3	104.8	102.5	109.6	27.8	35.3
H.C. 19	100.0	6.76	83.9	77.9	77.5	100.0	107.6	104.6	107.8	126.4	29.9	48.9
H.C. 20	100.0	102.6	90.4	86.1	69.4	100.0	105.2	103.6	9.96	9.76	10.5	28.2
Lazio Total	100.0	96.2	82.6	76.2	75.1	100.0	101.5	103.9	101.7	105.9	25.5	30.8
CENTRAL ITALY TOTAL	100.0	2.96	85.7	80.9	79.9	100.0	102.0	106.4	104.6	109.9	23.7	30.0

(Continued) Table 22 – Comparison of trends for the number of in-hospital stays and costs for the purchase of goods and services in the four years considered (I.N.: 2013 = 100.0)

,	,	,	2		,	,		9				
Hospital Centers	Number	r of impa hospi	impatient admission hospital admissions	Number of impatient admissions and day- hospital admissions	ınd day-	Cost for	Cost for the Purchase of Goods and services (Cod. BA010)	rchase of Goo (Cod. BA010)	oods and 0)	services	Index Number difference between costs for the Purchase of Goods and services, and admissions	ce between costs for the sand services, and ssions
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	In 2016	In 2017
H.C. 21	100.0	95.0	89.3	88.8	88.4	0.001	97.4	112.6	4.76	84.3	9.8	4.1
H.C. 22	100.0	93.3	89.2	88.4	88.0	100.0	108.5	114.4	102.7	111.5	14.3	23.5
Apulia total	100.0	94.4	89.3	88.7	88.2	100.0	100.9	113.1	I.66	92.9	10.4	4.7
H.C. 23	100.0	94.2	97.6	100.2	2.66	100.0	L'. L6	105.1	8.601	115.9	9.6	16.2
H.C. 24	100.0	95.2	94.3	6.88	88.5	100.0	93.8	108.5	104.4	109.7	15.5	21.2
H.C. 25	100.0	95.4	8.56	92.6	95.2	100.0	95.3	96.4	0.66	139.1	3.4	43.9
H.C. 26	100.0	94.0	92.1	86.7	86.3	0.001	108.1	107.4	0.511	128.8	26.3	42.5
Calabria Total	100.0	94.6	93.3	92.4	92.0	100.0	2.66	105.1	107.4	121.9	15.0	29.9
H.C. 27	100.0	83.4	6.87	85.3	82.3	100.0	8.101	1.701	113.4	122.4	28.1	40.1
H.C. 28	100.0	84.2	2.08	94.4	63.6	0.001	105.3	127.4	129.3	133.6	34.9	39.7
H.C. 29	100.0	87.2	84.9	94.1	93.7	0.001	104.5	124.9	125.3	124.0	31.2	30.3
H.C. 30	100.0	83.0	76.4	84.9	84.5	0.001	105.8	114.1	116.2	123.7	31.3	39.2
H.C. 31	100.0	90.1	9.68	102.8	102.3	0.001	105.7	141.6	139.1	152.0	36.3	49.7
H.C. 32	100.0	85.0	8.08	78.6	78.2	0.001	105.9	116.8	113.0	123.3	34.4	45.1
H.C. 33	100.0	86.1	76.5	88.0	9.78	0.001	103.6	102.1	6.601	106.0	21.9	18.4
H.C. 34	100.0	86.5	89.3	113.7	113.2	0.001	6.111	149.2	1.981	141.7	43.0	28.5
Sicily Total	100.0	85.8	82.2	92.5	8.16	0.001	105.5	122.6	124.8	126.5	32.3	34.7
SOUTH ITALY TOTAL	100.0	868	86.2	91.5	6.06	100.0	103.2	117.2	115.1	116.7	23.6	25.8
OVERALL TOTAL	100.0	93.7	92.0	92.6	93.7	0.001	101.8	112.9	112.2	117.9	9.61	24.2
	1.00	1.0	2010	01								

Source: survey by Ermeneia - Studi & Strategie di Sistema, 2018

But this operation was also supplemented by a calculation revaluating these "by-function" activities by way of applying the mechanism envisaged by the Ministerial Decree previously referred to: which means that the first case would yield a "real" percentage, whereas in the second case, a "virtual" percentage would be obtained, in the sense that the latter was calculated starting from revenues from health services + revenues from co-payment charges, both reconstructed through the aforementioned mechanism that generates a much larger denominator, capable of bringing the reasoning back to the level of potential support for the values recognized for "by-function" activities in view of the recovery of the balance of the Income Statement. The result of this comparison shows (see Table 23):

- a) first of all, an average increase in the value recognized on the Financial Statement for the "by-function" activities that can be summarized, in terms of Index Numbers, from 100.0 in 2013 to 105.7 in 2017. But the situation may appear different, if we consider:
 - the average situation in the North which shows an increase in the Index Number from 100.0 in 2013 to 120.5 in 2017, with a peak of 148.7 for the Hospital Centers in Emilia Romagna, but also for a Hospital Center in Veneto, though it should also be said that from 2014 onwards the consistent increase in Index Numbers gives a fairly clear idea of the "inflating" of "by-function" activities;
 - the average situation of the Central Italian hospitals that indicate a slight increase in the Index Number, which rose from 100.0 in 2013 to 101.8 in 2017, with some exceeding even 120 points in a Lazio Hospital Center and in both Hospital Centers in Marche: but it should also be emphasized that Lazio, in 2017, 2016 and 2015, shows Index Numbers lower than 100.0, which suggest an effort to "clean up" the Financial Statements:
 - and finally, the average situation in the South, which has a declining Index Number in 2017 and 2016: even if in the last year there are some peaks that approach or even exceed 120.0 as an Index Number, both in Calabria and in Sicily (but also in the South, in 2014 and 2015, there was an accentuation of the value assigned to "by-function" activities).

The item of "by-function" activities – it should be remembered – can actually include an extremely wide variety of services⁶, with the consequence of its trend being capable of reflecting both an actual and qualifying increase and implicit forms of coverage of the inefficiencies and therefore of budget covering by the Hospital Centers. This scenario might

⁶ See previous note 2.

- be confirmed by what has just been mentioned and that is by a strong concentration of the increase in these revenues in the three-year period preceding 2017: which could indicate an effort put in place to "rearrange" the budgets under the pressure of the provisions of the two 2015 and 2016 Stability Laws;
- b) an assonance with respect to what has just been mentioned appears if we look at the second group of data in Table 23, which shows the trend of the impact – again in the five-year period – of the value of "by-function" activities on the total of revenues from services + revenues from co-payment charges. As can be seen, in 2017 the Hospital Centers examined showed an average incidence of 36.6%, which however was higher in the previous three years (39.1% in 2016, 40.0% in 2015, and 42.4% in 2014). It is evident that the incidence, which is more than substantial, as mentioned above, appears to be somewhat "irregular" in that it is too high compared with revenues from health services and co-payment charges, but also too concentrated by number and variability of the services rendered, which makes it difficult to understand the Income Statement of the Hospital Centers that use one entry to express up to more than 40% of the total revenues. Moreover, it should also be remembered that the average incidence of 36.6% shows obvious differences according to the territories that are being examined, because:
 - in the Hospital Centers of the North this percentage drops to 32.5%, with peaks that can reach 38.3%, 44.7%, and even 71.8% for some Hospital Centers in Piedmont in 2017 (and in in this case the inappropriateness of a synthetic item that covers more than 40% of the revenues seems to all effects "irregular");
 - in the Hospital Centers of Central Italy, the average of 36.6% drops to 24.3%, but with higher peaks for the two Hospital Centers in Marche (31.0% and 43.3%). And this is also with the particularly evident downward spikes for the Hospital Centers in Lazio seen in much more "reasonable" areas, which were also seen in previous years (suggesting a more correct assessment of the actual amount of "by-function" activities, with more realistic incidences on revenues);
 - and finally, in the Hospital Centers in the South, the average national incidence of 36.6% rises to 52.4%, with particularly high peaks in the first Hospital Center in Calabria and in three Hospital Centers in Sicily, again with reference to the 2017 data (though it is also worth noting that the percentage incidence in the previous four years is significantly higher, confirming the fact that this item was probably used for implicit budget covering).

Table 23—Trend of revenues for "by-function" activities (I.N.: 2013 = 100.0) and comparison of the incidence of "by-function" activities on revenues for services + revenues from connument charges and incidence of the same but calculated according to the provisions of the same fifth Ministerial Device.*

payment charges and incluence of the same,	me, out ca	but calculated according to the provisions of the specific Ministerial Decree	ccoraing	וח וווב אור	visions y	ine specifi	TATITUST C	ini Decie	ę						
	Reve	nues for	"by-func	Revenues for "by-function" activities	vities	Percei	itage of "	by-functi	Percentage of "by-function" activities	ities	Percen	Percentage of "by-function" activities,	y-functio	m" activi	ties,
Homital Contone (1)		ä	as per the IS	2		ont of	revenues	for servic	out of revenues for services + revenues	unes	calcula	calculated using the Ministerial Decree	the Minis	sterial De	cree
nospitai Celiters (1)		Ŭ	(Cod. AA0030)	30)			from co-	from co-payment charge	charge			me	mechanism		
	2013	2014	2015	9107	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 1	100.0	86.2	94.1	111.5	113.6	33.6	29.6	31.3	36.8	38.3	25.1	22.9	23.8	26.9	27.7
H.C. 2	100.0	103.4	115.7	140.3	105.3	34.0	34.8	37.5	45.1	33.4	25.3	25.8	27.3	31.1	25.0
H.C. 3	100.0	101.0	102.9	112.4	115.2	26.7	27.9	27.5	29.3	29.7	21.1	21.8	21.5	22.6	22.9
H.C. 4	100.0	6.96	104.9	116.1	120.9	39.7	39.4	41.3	43.7	44.7	28.4	28.3	29.3	30.4	30.9
H.C. 5	100.0	112.0	111.8	9.981	121.6	29.2	34.4	34.3	40.4	34.7	22.6	25.6	25.6	28.8	25.7
H.C. 6	100.0	4.76	98.8	1001	9.701	66.1	65.7	65.2	6.99	71.8	39.8	9.68	39.5	40.1	41.8
Piedmont Total	100.0	98.4	102.0	I.0II	110.5	46.7	46.9	47.4	50.6	50.5	31.8	3I.9	32.2	33.6	33.5
H.C. 7	100.0	147.4	144.8	175.6	127.4	22.0	33.0	32.0	38.7	26.5	18.0	24.8	24.2	27.9	21.0
H.C. 8	100.0	8.011	134.2	124.8	8.011	24.2	26.3	59.9	56.9	23.0	19.5	20.8	23.0	21.2	18.7
Veneto total	100.0	128.8	139.4	8.671	6.8II	23.1	29.7	30.9	32.6	24.7	18.7	22.9	23.6	24.6	19.8
H.C. 9	100.0	131.1	121.6	123.3	132.1	15.9	20.4	18.7	18.9	20.2	13.7	17.0	15.8	15.9	16.8
H.C. 10	100.0	0.76	105.1	115.3	115.3	13.9	13.4	14.5	15.8	15.8	12.2	11.8	12.6	13.7	13.7
H.C. 11	100.0	127.4	132.6	135.5	187.8	16.2	20.7	21.5	22.0	19.3	13.9	17.1	17.7	18.0	16.2
H.C. 12	100.0	117.1	120.1	127.7	135.7	17.5	20.4	20.8	21.6	22.3	14.9	16.9	17.2	17.7	18.2
H.C. 13	100.0	210.6	232.2	199.0	192.3	17.9	37.0	40.6	35.0	33.0	15.2	27.0	28.9	25.9	24.8
Emilia Romagna Total	100.0	133.6	138.0	137.6	148.7	16.4	21.7	22.3	22.0	21.7	14.1	17.8	18.2	18.0	17.8
NORTH ITALY TOTAL	100.0	111.8	116.9	123.5	120.5	29.2	32.8	33.6	35.1	32.5	22.6	24.7	25.1	26.0	24.5
H.C. 14	100.0	117.7	111.1	128.3	126.1	36.4	44.9	43.4	48.6	43.3	26.7	31.0	30.3	32.7	30.2
H.C. 15	100.0	124.5	139.4	129.1	121.2	25.9	34.4	39.0	34.3	31.0	20.6	25.6	28.0	25.5	23.7
Marche Total	100.0	121.5	127.1	128.7	123.4	29.6	38.2	40.5	39.3	35.5	22.9	27.6	28.8	28.2	26.2
H.C. 16	100.0	116.0	88.8	76.5	81.2	24.3	28.6	22.5	20.2	21.4	19.6	22.2	18.4	16.8	17.7
H.C. 17	100.0	141.8	97.5	81.2	75.7	16.8	25.6	15.5	13.3	12.4	14.4	20.4	13.4	II.7	11.0
H.C. 18	100.0	111.8	89.2	85.7	85.2	29.0	33.8	26.2	25.I	24.3	22.5	25.3	20.8	20.0	19.6
H.C. 19	100.0	123.2	103.1	95.9	95.8	14.2	17.5	14.2	12.9	12.2	12.4	14.9	12.4	11.4	10.9
H.C. 20	100.0	112.5	109.0	108.9	124.8	17.9	19.3	17.6	17.2	19.1	15.2	16.1	14.9	14.6	16.0
Lazio Total	100.0	116.8	93.8	86.9	9.68	22.4	26.6	20.7	19.2	19.4	18.3	21.0	I7.I	16.1	16.3
CENTRAL ITALY TOTAL	100.0	118.5	105.9	102.1	101.8	24.6	30.0	26.3	25.1	24.3	19.7	23.1	20.8	20.1	19.5

ν;

(Continued) Table 23 - Trend of revenues for "by-function" activities (I.N.: 2013 = 100.0) and comparison of the incidence of "by-function" activities on revenues for services + revenues from co-payment charges and incidence of the same, but calculated according to the provisions of the specific Ministerial Decree*

	Reve	nues for	"by-func	Revenues for "by-function" activities	vities	Percei	rage of "	by-funct	Percentage of "by-function" activities	ities	Percen	Percentage of "by-function" activities,	y-functio	n" activi	ties,
Homital Contons (1)		ä	as per the IS	S		ont of	revenues	for servi	out of revenues for services + revenues	sanus	calculat	calculated using the Ministerial Decree	the Minis	terial De	cree
nospitai Centers (1)		(C	(Cod. AA0030)	(30)			from co-	from co-payment charge	charge			me	mechanism		
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 21	100.0	117.1	97.4	96.5	99.5	52.6	60.6	48.5	51.3	55.6	34.5	37.7	32.7	33.9	35.7
H.C. 22	100.0	9.601	93.2	92.8	0.66	47.1	48.8	41.6	44.3	44.7	32.0	32.8	29.4	30.7	30.9
Apulia total	100.0	112.7	0.96	95.3	99.3	50.7	56.4	46.0	48.8	51.5	33.6	36.1	31.5	32.8	34.0
H.C. 23	100.0	4.66	104.0	78.6	85.4	84.3	84.6	89.1	55.6	0.09	45.8	45.8	47.1	35.7	37.5
H.C. 24	100.0	1.86	98.1	9.98	64.7	69.2	8.79	2.79	56.2	38.6	40.9	40.4	40.4	36.0	27.9
H.C. 25	100.0	9'96	3.0	154.1	118.5	39.4	38.1	1.0	47.3	29.5	28.3	9.72	1.0	32.1	22.8
H.C. 26	100.0	0.001	61.7	91.5	7.26	66.5	67.1	62.2	55.7	52.3	40.0	40.2	38.3	35.8	34.4
Calabria Total	0.001	0.66	92.4	89.4	83.5	9.69	69.3	9.69	54.7	47.4	41.0	6.04	38.9	35.4	32.2
H.C. 27	100.0	106.6	106.2	106.5	92.3	53.3	59.1	55.2	55.3	44.2	34.8	37.1	35.5	35.6	30.7
H.C. 28	100.0	112.5	104.1	104.7	103.9	45.4	52.6	45.0	41.8	41.6	31.2	34.5	31.0	29.5	29.4
H.C. 29	100.0	102.1	106.1	103.8	93.7	62.7	63.7	60.3	57.5	52.9	38.5	38.9	37.6	36.5	34.6
H.C. 30	100.0	130.8	1111.1	100.2	82.8	86.3	117.8	96.4	84.6	72.1	46.3	54.1	49.1	45.8	41.9
H.C. 31	100.0	8.66	95.0	94.4	9.901	47.8	45.9	39.0	36.6	41.8	32.3	31.5	28.1	26.8	29.5
H.C. 32	100.0	112.5	104.5	93.2	90.5	73.4	84.1	72.9	62.1	60.2	42.3	45.7	42.2	38.3	37.6
H.C. 33	100.0	114.3	112.8	101.8	88.8	89.7	103.3	101.7	86.2	77.2	47.3	8.03	50.4	46.3	43.6
H.C. 34	100.0	151.9	150.2	128.0	127.1	50.1	76.2	64.9	47.0	50.1	33.4	43.3	39.4	32.0	33.4
Sicily Total	100.0	114.7	110.4	102.9	95.7	63.6	73.7	65.7	57.8	54.4	38.9	42.4	39.7	36.6	35.2
SOUTH ITALY TOTAL	100.0	111.3	104.1	8.86	94.1	61.5	68.7	9.09	55.3	52.4	38.1	40.7	37.7	35.6	34.4
OVERALL TOTAL	100.0	112.5	109.4	109.1	105.7	37.3	42.4	40.0	39.1	36.6	27.2	8.62	28.6	28.1	8.97
v 1		, ,		.1.1.2							000170				

(*) Ministerial Decree implementing Art. 1, paragraph 526 of the 2016 Stability Law, starting from Art. 8-sexies of Legislative Decree 502/1992 and subsequent amendments. (1) Processing of the Income Statement data of the individual Hospital Centers and University Hospital Centers, shown in Table App. 1. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

The incidence of "by-function" activities on revenues from services + revenues from co-payment charges effectively indicated in the Income Statements, winds up reaffirming the item as an "inflationary anomaly", which has been variously modulated during the five-year period examined:

- c) finally, it is interesting to take into consideration the last group of data in Table 23, in which the recalculation of the percentage incidence of the value on the financial statements for the "by-function" activities was shown, applying the "generous" criterion of the frequently cited Ministerial Decree. This recalculation defines a theoretical maximum flat-rate limit of 30%: even if the corresponding value in the financial statements should be recognized only for those Hospital Centers that have actually performed particularly numerous and especially high-quality activities. As can be seen, the percentages thus calculated are more limited than the real ones, shown in the second group of data in Table 23, and this is due to the obvious reason that the calculation mechanism artificially increases the base upon which the incidence is calculated. And despite this some of the Hospitals are approaching and sometimes exceeding the same (theoretical) limit of 30%. It can be observed that this limit is exceeded:
 - by the Hospital Centers in Southern Italy, reaching 34.4%, followed by 24.5% for the Hospital Centers in the North, and 19.5% of the Hospital Centers in Central Italy: though it must be remembered that the value of these incidences correspond to the real incidences on revenues from health care services + revenues for co-payment charges, which are 52.4% for the South, 32.5% for the North, and 24.3% for Central Italy (values that are therefore already substantial);
 - by almost all of the Hospital Centers in Sicily, by two out of four Hospital Centers in Calabria, by both the Hospitals in Apulia, by one in Marche, and by two in Piedmont.

It is clear that if we were to apply the percentage of "by-function" activities actually recognizable on the basis of the quantity and quality of the services, even with the "generous" calculation provided for by the Ministerial Decree, the potential extra-revenues would assume an even more substantial size.

At this point it is also worth considering the operating results of the Hospital Centers for the last 5 years examined, as well as the incidence of these results on revenues from services + revenues from co-payment charges. Regarding this, the following reflections can be made on the basis of the data contained in Table 24, which show that:

- a) the comparison between costs and revenues of Hospitals in some Regions is striking when it assumes the characteristics of a perfect balance, this situation is absolutely unlikely in any type of public or private financial statement: this result, in other words, inevitably suggests that the items have been adjusted during the preparation of data for the final balance sheet. But this does not mean that we are always and in each case dealing with a "somewhat irregular" solution, though it is certain that in some cases compensatory support interventions may exist thanks to the item of revenues for "by-function" activities. The perfect balance of the cited Budget regards the Hospital Centers of Emilia Romagna, Marche, Sicily and, (to a greater or lesser extent) a portion of the Hospital Centers in Piedmont, Veneto, Apulia and Calabria;
- b) furthermore, in the Hospital Centers that report or have reported an imperfect balance between costs and revenues, a decrease in losses between 2013 and 2017 can be seen that also meets the objectives of the 2015 and 2016 Stability Laws. With specific regard to Lazio, when considering the incidence of losses over the five-year period, we can see a progressive effort to reduce losses. Though it cannot help but be noted that the high percentage of the losses expresses a clear counter-trend with respect to the Hospital Centers of the other Regions, probably due to the efforts made in this regard, within the realm of compulsory administration actions, which are probably oriented towards an explication of the real deficit, and this phenomenon also occurred in one or two other Southern Hospital Centers. In any case, with the exception of Lazio, the percentage incidence of the losses shown in Table 24 is well below the 7% limit set by the 2016 Stability Law.

Centers in the four years considered (in thousands of euros)

Table 24 – Operating results of the Hospital Centers in the four years considered (in thousands of euros)	ers in the four y	ears consider	ed (in thousa	nds of euros)						
		Operatin	Operating results as per the IS	er the IS		Percentag	e of the oper	ating results	Percentage of the operating results (+/-) on revenues from	nes from
Hospital Centers			(A.V.)				services -	services + co-payment charges	t charges	
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 1	0	- 10,147	-7716	0	1926	0.0	5.6 -	0.7 -	0.0	1.8
H.C. 2	- 5,990	- 12,852	- 18,864	- 6,428	- 2,406	- 3.2	- 6.8	9.6-	- 3.2	- 1.2
H.C. 3	0	- 5,619	0	-	1	0.0	- 3.2	0.0	0.0	0.0
H.C. 4	0	- 5,737	- 4,486	-	1,180	0.0	- 3.8	- 2.8	0.0	0.7
H.C. 5	0	- 8,432	- 6,568	-	- 1,495	0.0	8.9 -	- 5.3	0.0	- 1.1
H.C. 6	- 12,750	- 30,648	- 15,081	-11040	-17478	- 2.3	9.6 -	-2.7	- 2.0	- 3.2
Piedmont Total	- 18,740	- 73,435	- 52,715	- 17,468	- 18,273	- I.4	- 5.7	0.4.0	- I.3	- I.4
H.C. 7	- 25,609	- 22,835	- 17,047	- 10,491		- 6.0	- 5.4	0.4.0	- 2.5	0.0
H.C. 8	- 24,950	- 13,451	1,000	-	-	- 6.2	- 3.3	0.2	0.0	0.0
Veneto total	- 50,559	- 36,286	- 16,047	16,491		- 6.I	+.4.4	6'I'-	- I.2	0.0
H.C. 9	0	0	0	0		0.0	0.0	0.0	0.0	0.0
H.C. 10	0	0		0		0.0	0.0	0.0	0.0	0.0
H.C. 11	0	0	0	0		0.0	0.0	0.0	0.0	0.0
H.C. 12	0	0	0	0		0.0	0.0	0.0	0.0	0.0
H.C. 13	0	0	0	0		0.0	0.0	0.0	0.0	0.0
Emilia Romagna Total						0.0	0.0	0.0	0.0	0.0
NORTH ITALY TOTAL	- 69,299	- 109,721	- 68,762	- 27,959	- 18,273	- 2.0	- 3.1	-1.9	- 0.8	- 0.5
H.C. 14	0	0	0	0		0.0	0.0	0.0	0.0	0.0
H.C. 15	0	0	0	-		0.0	0.0	0.0	0.0	0.0
Marche Total	0	_	_	-		0.0	0.0	0.0	0.0	0.0
H.C. 16	- 151,274	- 158,632	- 161,799	- 155,718	- 130,712	- 60.9	- 64.8	6.79 -	- 68.0	- 57.1
H.C. 17	- 91,594	- 102,291	- 98,853	- 81,733	- 83,599	- 71.8	- 85.9	- 73.3	- 62.3	- 63.8
H.C. 18	- 77,273	- 74,610	- 92,543	- 140,252	- 104,166	- 23.4	- 23.6	- 28.5	- 42.9	- 31.1
H.C. 19	- 102,291	- 53,708	- 54,160	- 49,108	- 41,510	- 74.5	- 39.2	- 38.3	- 33.9	- 27.3
H.C. 20	- 55,349	- 73,601	- 62,567	- 41,794	- 24,902	- 31.7	- 40.4	- 32.3	- 21.1	- 12.2
Lazio Total	- 477,781	- 462,842	- 469,922	- 468,605	- 384,889	- 46.9	- 46.3	- 45.5	- 45.5	- 36.6
CENTRAL ITALY TOTAL	- 477,781	- 462,842	- 469,922	- 468,605	- 384,889	- 32.8	- 32.8	- 32.6	- 32.2	- 25.6

(Continued) Table 24 - Operating results of the Hospital Centers in the four years considered (in thousands of euros)

,		Oneratin	Onerating results as ner the IS	er the IS		Percentag	of the oner	ating results	Percentage of the operating results (±/-) on revenues from	mes from
Hospital Centers			(A.V.)				services	services + co-payment charges	charges	
•	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 21	0	0	- 28,102	- 19,736	- 9,740	0.0	0.0	-8.7	- 6.5	- 3.4
H.C. 22	0	0	0	0	1	0.0	0.0	0.0	0.0	0.0
Apulia total	0	-	- 28,102	- 19,736	- 9,740	0.0	0.0	- 5.6	- 4.2	- 2.1
H.C. 23	- 4,584	- 6,007	- 1,880	0	0	- 4.6	- 6.1	- 1.9	0.0	0.0
H.C. 24	- 1,682	- 3,764	- 2,265	-	- 12,930	- 1.7	- 3.9	- 2.3	0.0	- 11.4
H.C. 25	- 15,516	- 14,562	- 29,858	- 42,000	- 12,319	- 41.2	- 38.7	- 67.1	<i>L</i> 98 -	- 20.6
H.C. 26	0	-17377	-20279	0	0	0.0	- 18.2	- 21.5	0.0	0.0
Calabria Total	- 21,782	- 41,710	- 54,282	- 42,000	- 25,249	9.9 -	- 12.6	- 16.2	III -	- 6.2
H.C. 27	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
H.C. 28	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
H.C. 29	0	788	0	0	0	0.0	0.4	0.0	0.0	0.0
H.C. 30	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
H.C. 31	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
H.C. 32	0	2,456	2,680	0	0	0.0	1.6	1.6	0.0	0.0
H.C. 33	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
H.C. 34	0	2209	0	1120		0.0	1.8	0.0	2.0	0.0
Sicily Total	-	5,453	2,680	1,120		0.0	0.5	0.2	0.1	0.0
SOUTH ITALY TOTAL	- 21,782	- 36,257	- 79,704	- 60,616	- 34,989	-1.1	- 1.9	-3.9	- 2.8	- 1.6
OVERALL TOTAL	- 568,862	- 608,820	- 618,388	- 557,180	- 438,151	- 8.2	- 8.8	- 8.7	L'L -	- 5.8
(1) D	111 1			C1 ': II '						

(1) Processing of the Income Statement data of the individual Hospital Centers and University Hospital Centers, shown in Table App. 1. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

4.2. An estimate of the impact of inefficiencies on the expenditure of public hospital facilities

After taking into consideration some "anomalies", and detecting the possible presence of "irregular" extra-revenues, some projections were made of the total public hospital expenditure. The starting point is once again the "byfunction" activities and their particularly high amount, especially if we take into account the provisions of the Ministerial Decree implementing Art. 1, paragraph 526, of the 2016 Stability Law, based on Art. 8-sexies of Legislative Decree 502/1992 and subsequent amendments (repeatedly mentioned in these pages). This is also because the route from the anomalies to the "irregular" extra-revenues can assume the characteristics of an implicit form of budget covering.

As highlighted in detail in Section 1 of the Appendices, dedicated to the methodology used for this, the following procedures were followed:

- first of all, the "theoretical" amount of "by-function" activities that would exceed the three rates (already high in themselves) of 20%, 25% and 30% was given a value, calculated according to the aforementioned Ministerial Decree on the total revenues from health care services + co-payment charges;
- in the second place, the difference between the "theoretical" amount of "by-function" activities that would be lower than the "real" amount, which would be greater, thus arriving at a negative imbalance of potential extra-revenues to which the actual results of the fiscal year 2017 have been added (some with a perfect balance and some with a loss);
- the aforementioned exercise was reported in its entirety in the Tables in App. 4, App. 5, and App. 6 of the statistical Appendices, but a summary of the comparison, shown in Table 25 below, was also prepared. From it we can see how an initial "differentiation" of potential implicit extra-revenues emerges, from a minimum of EUR 802 million (which represents the compensation that would go beyond the theoretical 30% for the "byfunction" activities) to a maximum of EUR 1,440 million (which would constitute the value of "by-function" activities if 20% were applied as a percentage).

However, we can get even closer to a more precise estimate if we remember that a theoretical amount of the "by-function" activities equal to 20%, calculated according to the methods set out in the Ministerial Decree corresponds to a "real" incidence of about 25% on the health care services + copayment charges and, that 30%, again calculated according to the Ministerial

Decree methods, would actually correspond to 44% of "by-function" activities on the Income Statement: these are therefore absolutely high values that would imply the performance of a significant number of services with a consistent quality level. It should therefore be emphasized that the result of the calculations shown in Table 25, which allow for the determination of the EUR 802-1,440 million spread, could be significantly more substantial.

Moreover, continuing the completely prudential reasoning that has been utilized (and that it would be better defined as decidedly "generous") serves (see again Section 1 of the Appendices):

- on the one hand, to add in the estimate for the remaining 10 Hospital Centers not included in the 34 examined, for which the relative differentiation gap would be between EUR 236 and 424 million, by adopting an assessment that reflects the average of the aforementioned 34 Centers;
- and, on the other hand, to add to the latter values of EUR 802-1,440 million, that yields a total of extra-revenues between EUR 1,038 and 1,864 million.

If we then extend the estimate to include the directly managed hospitals that at present also include the 29 former Hospital Centers in Lombardy, as well as the 2 in Friuli Venezia Giulia and Sardinia that have integrated activities previously associated with the local health authorities, it is possible to hypothesize a doubling of the total figure just mentioned, also because the total public expenditure for the Hospital Centers is only a little lower than the expenditure for directly managed hospitals. But if we assume an identical estimate, accepting the scenario of a level of efficiency/inefficiency of the directly managed Hospitals equal to that of the Hospital Centers (a very optimistic assumption, by the way) we would arrive at a further differentiation of EUR 1,038-1,864 million.

The conclusion is that the total estimate of the implicit extra-revenues, calculated at more than the minimum, present within the public hospital system would be equal to the sum of the values previously mentioned, i.e. EUR 2,076-3,728 million. It is clear that a more precise estimate would require the ability to assess the suitability of the recognition of "by-function" activities actually performed and weighed according to their quality for each individual Hospital Center, which would probably lead to a reduction of the items in the financial statements and a worsening of the operating results. And a similar assessment would also need to be prepared for the directly managed Hospitals.

Finally, to sum up what has been set forth in Sections 4.1 and 4.2, it is worth recalling that the underlying reasons for the monitoring carried out

annually on the Income Statements of the Hospital Centers are those necessitated by the following:

- making the level of efficiency/inefficiency in the management of public hospitals more transparent and consequently being able to compare the different performance levels between different facilities, since the average data can be deceptive and underestimate the differences not presenting a true picture of the actual situation and, therefore, making it impossible to "reward" the better facilities and penalize the worst ones (for which the real contextual conditions must of course be carefully evaluated);
- being able to intervene in a timely manner and not only after the fact when
 the results of inefficient management have already become manifest and
 are often accumulated over the years, with the inevitable consequence of
 being placed under compulsory administration;
- freeing up potential hidden financial resources that can and must be better used to reorganize and better equip hospital facilities, as well as to perform regular and extraordinary maintenance as needed;
- contributing to transforming a collective culture that accepts public inefficiency too easily instead of making the best use of the (scarce) resources available;
- evaluating what the public service really costs, examining and weighing all the legitimate expenditure components (in relation to the services actually rendered and the quality it has been possible to provide) in order to make "how much is spent to obtain something" transparent and justified;
- and finally, unifying the payment schemes used for public facilities with those for the accredited private facilities for the same services provided: please note that the latter are paid exclusively on the basis of the DRGs that include not only operating but also investment costs, whereas the former (and for now only the Hospital Centers and not the directly managed hospitals) also receive capital contributions in addition to the DRGs and, traditionally, also contributions for contract renewals.

Of course, it is not only the "by-function" activities item that can hide significant inefficiency amounts and the presence of irregular extra-revenues that become de facto forms of balancing budgets, there are also many other items that can be explored. But it is clear that "by-function" activities often have such a high incidence on hospital production (+ co-payment charges) that they go beyond any understandable management workings. Not to mention the fact that they do not allow for legitimate and effective transparency of the financial statements that must be accessible and comparable. This does

not detract from the fact that the need for territorial oversight must be legitimately kept in mind, as the public system must ensure this in any case, sometimes even with amounts of losses, but on condition that this is transparent and justified.

It is evident that – and we said as much with the proposal put forward last year – that there is a need to introduce a detailed report of the "by-function" activities actually performed, perhaps supplemented by a cost-benefit analysis, in order to link the compensation paid to this activity not only to the number of patients treated but also to the quality of the services provided and their results. This would overcome the prevailing tendency to finance the organization as it is at present, with its built-in relative inefficiencies that do not make it possible to distinguish, based on an understanding of the facts, worthy and efficient facilities from inefficient and undeserving facilities.

Table 25 – Summary of potential extra-revenues in the Hospital Centers examined (in thousands of euros) 1

Hospital Centers	2017 operating	Calculation of extra-revenues in	Calculation of extra-revenues in	Calculation of extra-revenues in	Tota	Total Potential Extra-revenues	nes
by geographical area	results as per the IS	the Ministerial Decree scenario at 20%	the Ministerial Decree scenario at 25%	the Ministerial Decree scenario at 30%	Operating losses + Ministerial Decree calculation at 20%	Africating losses + Operating losses + Operating losses Ministerial Decree Ministerial Decree Ministerial Decree alculation at 20% calculation at 25% calculation at 30%	Operating losses + Ministerial Decree calculation at 30%
North	- 18,273	503,721	387,343	307,867	- 385,546	- 255,998	- 180,386
Center	- 384,889	112,712	54,853	70,525	- 432,198	-401,226	- 385,554
South and Islands	- 34,989	540,781	623,427	604,805	- 628,657	- 412,651	- 236,487
Italy Total	- 438,151	1,157,213	1,065,623	983,197	- 1,446,401	- 1,069,875	- 802,427

The data relating to the public Hospital Centers examined has been grouped by geographical area, whereas the detailed data can be found in the Tables App. 4, App. 5, and App. 6 of

Section 1 of the Appendices. Source: Survey by Ermeneia – Studi & Strategie di Sistema, 2018

Part Two

Statistical indicators

1. Facility data

1.1. Number of public and accredited private medical institutions

As we continue to await the publication of the 2014 edition of the "Management and Financial Activities of the Local Health Authority and Hospital Centers" Report, which reports the data for facility and activity in the sector, again this year the alternative source "Open Data" published by the Ministry of Health was used, now available in the 2010-2016 edition. According to the information available in this area of the Ministry of Health web portal, the progressive restructuring of the Italian hospital landscape which, since 2004, has affected, above all, the network of public facilities, continues, even if in less a marked manner than in previous years. This network has, as has already been mentioned several times, in fact been subject to aggregations and transformations into new types of institutions, mainly from a hospital system directly managed by local health authorities towards new organizational forms within variously articulated Hospital-Center systems (Hospital Centers, Centers integrated with universities, Centers integrated with the NHS). In the private sector, however, the trend, already found in some Regions, especially Lazio, of the reconversion or the actual downgrading of many accredited facilities into production centers with distinctly long-term, residential or even territorial characteristics is clearly seen.

More in general, data from the Ministry of Health indicate for 2016 a further reduction compared to four units among the hospitals under the direct management of the local health authority the year before, of nine accredited healthcare facilities. Compared to 2012, the new reference year for the data presented, it can be seen that the total of public and private healthcare institutions decreased from 1,091 to 1,034 units in 2016, a total reduction of -5.2%. Tables S/1 and S/2 show, in particular:

- in the public sector, above all a reduction in the directly managed Hospitals (-8.4%), followed by the 'pure' Hospital Centers (-3.4%), for the most part probably merged into the ranks of the Hospital Centers integrated with the NHS, which increased by 12.5% between 2012 and 2016; overall, public healthcare and assimilated institutions have seen a gradual decline during the period considered, with a final delta of -6.4%, although it must be pointed out that there are more reconversions of types or aggregations than of real divestments;
- in the context of private institutions in the strict sense (accredited healthcare facilities), there is confirmation of the trend towards a less pronounced downsizing, which saw its presence in the hospital system decrease from 512 units in 2012 to 492 in 2016 (-3.9%).

The ratio of public hospitals (in their traditional ministerial classification that includes assimilated institutions) to private hospitals (accredited healthcare facilities) within the total number of hospital institutions shows a national average of 52.4% for the former and 47.6% for the latter (Table S/4), and is fairly well balanced in most Italian regions, again keeping in mind the larger size and the average number of patient beds found in the public institutions.

Considering the ratio of public/private institutions from Region to Region as reported in the data for 2016, we can see in which geographical areas there is a greater number of public institutions and where there is a sort of balance of the 'somewhat mixed system' between these two sectors (Table S/4):

- a greater number of public facilities is found especially in Basilicata, Sardinia, Friuli Venezia Giulia, Veneto, Umbria, Liguria, Tuscany, Molise, Abruzzo, and in the autonomous province of Trento;
- the presence of a somewhat mixed system (with greater balance between the types of institutions) is instead found mainly in Campania, Lombardy, Lazio, Piedmont, Calabria, the Aosta Valley, and Sicily.

1.2. Bed distribution

Focusing on the analysis of number of beds, rather than on the number of healthcare institutions, whose public/private ratios are, as has already been mentioned, strongly affected by institutions' size, it can be seen that in Italy there were just over 193,000 beds available in 2016, divided up in a rather stable distribution over time, i.e. 79% belonging to the public category in the broad sense and 21% to the category of accredited private healthcare facilities (Table S/5).

The territorial distribution still favors the North, with Central Italy and the South following in that order in the case of public facilities, and vice versa for private facilities.

The data percentages presented in Table S/5 also reveal steady territorial distribution for public and private patient beds given the desirable aim of achieving a balance of the "mixed system", although this system is uncertain and increasingly being called into question by the unsettling measures regarding the reorganization of the hospital system network, the approval procedure for which is currently in the delicate phase of regional implementation.

If we give a look at the distribution of patient beds by Region (again using the percentages contained in Table S/5), we can see that the greatest numbers for public facilities belong to Basilicata (94.7%), Liguria (94.5%), Veneto and Umbria (91.4%). On the other hand, the greatest numbers of patient beds in accredited private healthcare facilities belong mainly to Campania (35.6%), Calabria (33.7%), the Autonomous Province of Trento (27.9%), Sicily (27.1%), Abruzzo (26.1%), Lazio (25.9%), Emilia Romagna (22.8), and Piedmont (21.9%).

For the component of the accredited private sector offer represented by the AIOP facilities, it is instead possible to present an update to 2018, with a comparison limited to 2016 compared to the other private service components in Table S/6. This shows almost 31,000 beds for inpatient-admission purposes out of a total of just over 40,000, a percentage amounting to nearly 76%. This is a comparison valid for the "healthcare facility" type only.

The Regional distribution of AIOP's network of accredited institutions in 2018 shows a concentration among NHS accredited facilities according to the most prevalent nosological classifications (Table S/7):

- multi-specialist (181 out of 492 institutions);
- RSA/assisted living homes (100 out of 492 institutions);
- surgical (70 institutes of 492);
- rehabilitation (69 out of 492 institutions);
- neuro-psychiatry (35 out of 492 institutions);
- long-stay care (20 out of 492 institutions)
- medical (17 out of 492 institutions).

If we consider the different types of activities (see Tables S/8 and S/9), also belonging to the AIOP-associated institutions (2018), the greater concentrations at the national level are, in descending order: surgical, medical, rehabilitation, assisted living homes (R.S.A., Residenze Sanitarie Assistenziali), neuro-psychiatry, and long-stay care. There is also a large and signif-

icant amount for highly specialized areas (almost 1,000 patient beds), especially cardiac surgery.

1.3. Medical equipment

Even the distribution of allocations of equipment is affected by the failed update of 2014 data for the technological apparatus that supports and qualifies hospital activity and in most Italian regions also makes an important contribution in terms of assistance to the area. The 2013 situation may be deduced as per regional distribution and type of equipment from Table S/10 (for public facilities), Table S/11 (for accredited healthcare facilities), and from Table S/12 (for non-accredited healthcare facilities).

The data, presented once again in this report, seemed to confirm the significance of the contribution that the private hospital component provides to the supply of advanced technological services, continuing to ensure significant territorial compensation within the repeatedly invoked concept of the "mixed system".

Table S/10 (Public facilities) highlights that the bulk of the most sophisticated equipment (Computerized Axial Tomography – CT, Hemodialysis machines – HD, Magnetic Resonance Tomography – MRT, Linear Accelerators – LINACs) are mainly concentrated in hospitals in the North of Italy, except for Hyperbaric Chambers, which are much widespread in the South.

With reference to this equipment, Table S/11 shows how private facilities tend to "compensate" this imbalance with significant amounts of their own equipment situated in the South compared to the rest of the country, including Hyperbaric Chambers, CAT devices and Hemodialysis machines.

Table S/1 - Evolution in the number of public and assimilated, and private institutions (accredited healthcare facilities)

	2012	2	2013	3	20,	4	2015	.5	201	2
	A.V.	%	A.V.	%	A.V.	%	A.V.	%	A.V.	%
- Hospital Centers	69	5.4	69	5.5	65	5.6	27	5.4	27	5.5
 Directly managed hospitals 	379	34.7	362	33.9	350	33.1	351	33.5	347	33.6
 Hospital Centers integrated with the NHS 	∞	0.7	∞	0.7	6	6.0	6	6.0	6	6.0
 Hospital Centers integrated with universities 	19	1.7	19	1.8	18	1.7	18	1.7	18	1.7
 University hospitals 	7	0.2	7	0.2	7	0.2	7	0.2	7	0.2
 Institutes for Treatment and Research 	62	5.7	62	5.8	62	5.9	64	6.1	63	6.1
 Religiously-affiliated hospitals 	30	2.7	28	5.6	28	2.7	27	5.6	76	2.5
 Institutes-ASL Facilities 	17	1.6	17	1.6	19	1.8	18	1.7	18	1.7
 Research facilities 	3	0.3	33	0.3	3	0.3	7	0.2	7	0.2
Subtotal	579	53.1	260	52.4	550	52.1	548	52.2	542	52.4
 Private hospitals (accredited healthcare facilities) 	512	46.9	509	47.6	909	47.9	501	47.8	492	47.6
Grand Total	1,091	100.0	I,069	100.0	1,056	100.0	1,049	100.0	1,034	100.0
Source: data processed from the Report on "Attività aestiona	i od oconom	The delle II	"everling of the Use of the organization of the contract of the second of the contract of the	"ovoilphonse		Houlth Voi	dinistry of Health Vears 2012 and 2013 and Ministry of Health - Onen	2013 and M	inistry of Hoc	1th - Onen

Source: data processed from the Report on "Attività gestionali ed economiche delle Usl e Aziende ospedaliere", Ministry of Health, Years 2012 and 2013 and Ministry of Health – Open Data 2014-2016

Table S/2 — Evolution in the number of public and assimilated, and accredited private institutions (% increase)

	2013/2012	2014/2013	2015/2014	2016/2015	2016/2012
- Hospital Centers	0.0	0.0	-3.4	0.0	-3.4
 Directly managed hospitals 	4.5	-3.3	0.3	-1.1	-8.4
 Hospital Centers integrated with the NHS 	0.0	12.5	0.0	0.0	12.5
 Hospital Centers integrated with universities 	0.0	-5.3	0.0	0.0	-5.3
- University hospitals	0.0	0.0	0.0	0.0	0.0
 Institutes for Treatment and Research 	0.0	0.0	3.2	-1.6	1.6
 Religiously-affiliated hospitals 	-6.7	0.0	-3.6	-3.7	-13.3
- Institutes-ASL Facilities	0.0	11.8	-5.3	0.0	5.9
 Research facilities 	0.0	0.0	-33.3	0.0	-33.3
Subtotal	-3.3	-I.8	-0.4	-1.1	-6.4
 Private hospitals (accredited healthcare facilities) 	9.0-	9.0-	-1.0	-1.8	-3.9
Grand Total	-2.0	-1.2	-0.7	-1.4	-5.2
1000			** * * * * * * * * * * * * * * * * * * *		0 11 110

Source: data processed from the Report on "Attività Gestionali ed economiche delle Usl e Aziende ospedaliere", Ministry of Health, Years, 2012 and 2013 and Ministry of Health – Open Data 2014-2016

Table S/3 – Public and assimilated, and private institutions (accredited healthcare facilities), by region. Year 2016 (A.V.)

						,		,			
Regions	Hospital Centers	Directly managed hospitals	Hospital Centers integrated with the NHS	Hospital Centers integrated with universities	University hospitals	Institutes for Treatment and Research	Religiously- affiliated classif. hospitals	Institutes- USL Facilities	Research facilities	Total	Private hospitals (accredited healthcare facilities)
- Piedmont	3	21		3		3		9		36	39
 Aosta Valley 		1			•	•				_	1
 Lombardy 	29	1	,	•	•	26	5	ı	•	61	89
 A.P. of Bolzano 	•	7	,	•	•	•	,	,		7	9
 A.P. of Trento 		7			•	•	_			∞	5
- Veneto		21		_	•	ю	5	S	•	36	16
Friuli V.G.	•	10		2		2			•	14	5
 Liguria 	•	9				ю	2	•		Ξ	9
 Emilia Romagna 	1	15		4		В		1	•	24	44
- Tuscany	•	31		4		2	•	2	1	40	23
- Umbria	2	∞				1				10	5
Marche	7	5				-	•	•		∞	14
- Lazio	7	35	1	2	2	9	7	2		57	09
- Abruzzo	•	18				•	•	•	•	18	11
Molise	•	æ	,	•	•	-	,	,	1	5	ю
 Campania 	9	32	2	1		2	3	1		47	63
- Apulia	1	25	1	1	1	5	2	1	1	34	26
 Basilicata 	1	11		٠		1				13	2
Calabria	4	16	,	,	•	-	,	,		21	29
Sicily	5	52	ъ	,	•	4	_	1		99	59
 Sardinia 	1	22	2	,	•	•	•		•	25	7
North	34	68		10		40	13	12		198	190
Center		79	-	9	2	6	7	4	1	115	102
South		179	∞	2	•	14	9	7		229	200
Italy	57	347	6	I8	7	63	26	18	2	542	492
		1, 0, 1	, , , , , ,	0 1.1	7100						

Source: processing by Ermeneia - data from the Ministry of Health. Open Data 2016

Table S/4 – Public and assimilated, and private institutions (accredited healthcare facilities), by region. Year 2016/2015 (% Composition)

						2016						30	2015	
	Hospital Centers	Directly managed	Hospital Centers	Hospital Centers	University hospitals	Institutes for	Religiously- Institutes- Research affiliated USL facilities	Institutes- USL	Research facilities	Total public	Private hospitals	Total public	Private hospitals	Total
Kegions		hospitals	integrated	integrated	,	Treatment	classified	Facilities	,	institutions	(accredited	institutions	(accredited	neathcare facilities
			NHS NHS	wun universities		ana Research	nospuais				facilities)		facilities)	
- Piedmont	4.0	28.0	0.0	4.0	0.0	4.0	0.0	8.0	0.0	48.0	52.0	48.0	52.0	100.0
 Aosta Valley 	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	100.0
 Lombardy 	22.5	8.0	0.0	0.0	0.0	20.2	3.9	0.0	0.0	47.3	52.7	46.9	53.1	100.0
 A.P. of Bolzano 	0.0	53.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.8	46.2	58.3	41.7	100.0
 A.P. of Trento 		53.8	0.0	0.0	0.0	0.0	7.7	0.0	0.0	61.5	38.5	57.1	42.9	100.0
- Veneto		40.4	0.0	1.9	0.0	5.8	9.6	9.6	0.0	69.2	30.8	20.6	29.4	100.0
Friuli V.G.	0.0	52.6	0.0	10.5	0.0	10.5	0.0	0.0	0.0	73.7	26.3	73.7	26.3	100.0
Liguria	0.0	35.3	0.0	0.0	0.0	17.6	11.8	0.0	0.0	64.7	35.3	8.89	31.3	100.0
 Emilia R. 	1.5	22.1	0.0	5.9	0.0	4.4	0.0	1.5	0.0	35.3	64.7	36.2	63.8	100.0
Tuscany	0.0	49.2	0.0	6.3	0.0	3.2	0.0	3.2	1.6	63.5	36.5	59.7	40.3	100.0
Umbria	13.3	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3	2.99	33.3	100.0
Marche	9.1	22.7	0.0	0.0	0.0	4.5	0.0	0.0	0.0	36.4	63.6	38.1	61.9	100.0
- Lazio	1.7	29.9	6.0	1.7	1.7	5.1	0.9	1.7	0.0	48.7	51.3	49.6	50.4	100.0
Abruzzo	0.0	62.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.1	37.9	62.1	37.9	100.0
Molise	0.0	37.5	0.0	0.0	0.0	12.5	0.0	0.0	12.5	62.5	37.5	62.5	37.5	100.0
 Campania 	5.5	29.1	1.8	6.0	0.0	1.8	2.7	6.0	0.0	42.7	57.3	43.1	56.9	100.0
- Apulia	0.0	41.7	1.7	1.7	0.0	8.3	3.3	0.0	0.0	56.7	43.3	55.7	44.3	100.0
 Basilicata 	6.7	73.3	0.0	0.0	0.0	6.7	0.0	0.0	0.0	86.7	13.3	78.6	21.4	100.0
 Calabria 	8.0	32.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	42.0	58.0	42.3	57.7	100.0
Sicily	4.0	41.6	2.4	0.0	0.0	3.2	8.0	8.0	8.0	52.8	47.2	52.4	47.6	100.0
Sardinia	3.1	8.89	6.3	0.0	0.0	0.0	0.0	0.0	0.0	78.1	21.9	73.7	26.3	100.0
North	8.8	22.9	0.0	2.6	0.0	10.3	3.4	3.1	0.0	51.0	49.0	51.3	48.7	100.0
Center	2.8	36.4	0.5	2.8	6.0	4.1	3.2	1.8	0.5	53.0	47.0	52.7	47.3	100.0
South	4.0	41.7	1.9	0.5	0.0	3.3	1.4	0.5	0.2	53.4	46.6	52.9	47.1	100.0
Italy	5.5	33.6	6.0	1.7	0.2	6.1	2.5	1.7	0.2	52.4	47.6	52.2	47.8	100.0
		, ,	J. J. L.	171 - 113		7100 2100								

Source: processing by Ermeneia - data from the Ministry of Health. Open Data 2015-2016

Table S/5 – Public and accredited private patient beds used for hospitalization, by region. Year 2016

			2010				2012	
							Private hospitals	
Regions	Public and institu	Public and assimilated institutions (1)	Private	Private hospitals	Total	Public institutions	(accredited healthcare	Total
	Patient heds	% of the total	Patient beds	% of the total		% of the total	% of the total	
- Piedmont	11,891	78.1	3,340	21.9	15,231	78.1	21.9	100.0
 Aosta Valley 	378	84.2	71	15.8	449	85.0	15.0	100.0
- Lombardy	28,384	78.9	7,586	21.1	35,970	79.0	21.0	100.0
 A.P. of Bolzano 	1,606	84.9	285	15.1	1,891	8.98	13.2	100.0
 A.P. of Trento 	1,341	72.1	518	27.9	1,859	71.5	28.5	100.0
- Veneto	14,781	91.4	1,389	9.8	16,170	92.6	7.4	100.0
 Friuli Venezia Giulia 	3,740	9.06	389	9.4	4,129	90.1	6.6	100.0
- Liguria	4,794	94.5	280	5.5	5,074	96.2	3.8	100.0
 Emilia Romagna 	12,873	77.2	3,808	22.8	16,681	77.3	22.7	100.0
- Tuscany	9,128	85.6	1,536	14.4	10,664	85.1	14.9	100.0
- Umbria	2,531	91.4	239	9.8	2,770	91.3	8.7	100.0
- Marche	4,121	84.2	772	15.8	4,893	83.2	16.8	100.0
- Lazio	13,812	74.1	4,823	25.9	18,635	74.5	25.5	100.0
- Abruzzo	3,011	73.9	1,065	26.1	4,076	9.92	23.4	100.0
- Molise	1,123	88.9	140	11.1	1,263	88.9	11.1	100.0
 Campania 	10,049	64.4	5,566	35.6	15,615	64.7	35.3	100.0
- Apulia	9,505	80.3	2,331	19.7	11,836	9.08	19.4	100.0
- Basilicata	1,615	94.7	06	5.3	1,705	91.6	8.4	100.0
- Calabria	3,182	66.3	1,615	33.7	4,797	66.2	33.8	100.0
- Sicily	10,360	72.9	3,849	27.1	14,209	73.1	26.9	100.0
- Sardinia	4,217	82.7	885	17.3	5,102	81.4	18.6	100.0
North	79,788	81.9	17,666	18.1	97,454	82.2	17.8	100.0
Center	29,592	80.1	7,370	19.9	36,962	80.0	20.0	100.0
South	43,062	73.5	15,541	26.5	58,603	73.7	26.3	100.0
Italy	152,442	79.0	40,577	21.0	193,019	79.2	20.8	100.0
1) See Toble S/3								

1) See Table S/3. Source: processing by Ermeneia – data from the Ministry of Health

Table 8/6 – Private hospitals (private accredited healthcare facilities) affiliated with the NHS, by region – Institutions and patient beds. Year 2016

			AIOP		ARIS		Other.		Total
		Institutions	Accred. patient beds						
	Piedmont	24	2,003	9	674	6	693	39	3,340
ı	Aosta Valley	1	71					-	71
ı	Lombardy	38	4,571	14	1,907	16	1,108	89	7,586
1	Bolzano	3	176	-	33	2	92	9	285
1	Trento	3	290	-	83	-	145	5	518
1	Veneto	15	1,293			-	96	16	1,389
ı	Friuli V.G.	3	272			2	117	S	389
ı	Liguria	2	135	-	13	33	132	9	280
1	Emilia R.	41	3,605	-	92	2	127	4	3,808
1	Tuscany	13	852	9	261	4	423	23	1,536
1	Umbria	3	114	-	09	1	65	5	239
1	Marche	10	572	3	200	-		14	772
1	Lazio	42	3,228	S	295	13	1,300	09	4,823
ı	Abruzzo	6	826	7	87			11	1,065
1	Molise	2	100			1	40	3	140
Ī	Campania	55	4,936			∞	630	63	5,566
1	Apulia	23	2,144	-	54	2	133	26	2,331
1	Basilicata	1	50			1	40	7	06
Ī	Calabria	15	1,043			14	572	29	1,615
Ī	Sicily	51	3,511			∞	338	59	3,849
ı	Sardinia	9	835			1	50	7	885
1	North	130	12,416	24	2,786	36	2,464	190	17,666
Ī	Center	89	4,766	15	816	19	1,788	102	7,370
ı	South	162	13,597	3	141	35	1,803	200	15,541
Italy		360	30,779	42	3,743	06	6,055	492	40,577
%		73.2	75.9	8.5	9.2	18.3	14.9	100.0	100.0

Source: processing by Ermeneia - data from the Ministry of Health, Open Data 2016 and AIOP

Rehabilitation Моп-асстедітед Centers (Assisted living homes) healthcare facilities уоп-асстедітед Non-accredited Table 8/7 – Regional distribution of AIOP-associated institutions according to the most prevalent nosological classifications–Year 2018 Rehabilitation Long-stay care pts Non-accredited Accredited Neuro-psychiatry Non-accredited Accredited Non-accredited Surgical Medical Accredited Multi-specialist Non-accredited Aosta Valley Italy Source: AIOP Friuli V.G. Lombardy Campania Piedmont Basilicata Emilia R. Tuscany Abruzzo - Calabria Bolzano Sardinia Liguria Apulia Veneto Umbria Marche Molise Trento Lazio Sicily Regions Center South

Table 8/8 - Regional distribution of patient beds of the AIOP-associated institutions according to the different types of activities - Year 2018

High		Specialty	Medical	cal	Surgical		Neuro-psyci	hiatry 1	Neuro-psychiatry Long-stay care pts		Rehabilitation		RSA (Assisted living homes)	omes)	Total	Rehabi Cer	Rehabilitation Centers
Regions	h9iib9155A	Non-accredited	Accredited	Non-accredited	Accredited	рәңрәлээр-иоМ	рәлірәлəэ	Non-accredited	рәлірәлəə <i>\</i>	Non-accredited	hetiberzoh	рәңрәлээр-иоN	рәңірәлээҰ	Моп-асстедінед	non-accredited	Accredited	рәңірәлээр-иоМ
- Piedmont	06	10	404	98	692	250	288	32	333	18	549	10	408	- 2,76		- 3	
 Aosta Valley 	•	•			12	4	,	٠	•	٠	2	٠		_ 7		_	
Lombardy	4	18	2,819	106	3,013	185	103	20	13	1	2,148	55	2,679	24 11,216		99 8	
- Bolzano	•	1	15	∞		•	٠	٠	20	22	169	33	•	- 20			
- Trento	•	•	86	15	38	•	•	١	167	17	25	٠	21	- 34		,	
- Veneto	∞	1	4	87	610	218	362	48	70	٠	624	94	332	- 2,44		- '	
Friuli V.G.	•	•	94	17	153	20	•	١	•	•	108	٠	7.5	77 43		_	
 Liguria 	15	1	43	47	15	73	•	٠	•	•	29	٠		- 14		-	
 Emilia R. 	73	2	1,065	35	1,516	139	605	2	570	5	914	45	475	170 5,21		~	
Tuscany	21	1	208	_	621	99	105	_	182	٠	348	•				3 126	
- Umbria	•	'	'	1	130	٠	•	٠	43	٠	16	٠	40	20 22			
Marche	1	1	202	1	279	•	50	٠	112	•	86	٠	104				
- Lazio	٠	64	1,372	472	1,697	1,157	623	∞	594	63	1,193	357	3,875	239 9,35		634	
Abruzzo	•	•	286	103	339	136	100	١	•	•	153	154	28				
Molise	•	'	110	52	82	•	•	٠	•	٠	148	100		- 34			
 Campania 	79	13	982	265	2,281	412	473	121	524	55	1,022	12					
- Apulia	172	•	837	83	756	144	16	•	80	•	604	108	801	258 3,26			27
 Basilicata 	•	•	•	'	99	٠	•	٠	16	٠	166	٠	120				
 Calabria 	•	1	161	3	479	30	•	٠	135	•	501	٠	182	- 1,45	8 33		
Sicily	87	7	1,251	24	1,830	23	145	23	101	-	620	43	335	78 4,36		_	
 Sardinia 	•	'	191	1	407	•	•	٠	26	•	131	٠		- 82			•
North	627	30	4,979		6,049	688	1,358	102	1,173		4,668	237	3,990				
Center	21	64	1,782		2,727	1,213	778	6	931		1,655	357	4,019				
South	338	15	3,818	530	6,233	745	734	144	953	99	3,345	417	1,466	363 16,88	7 2,270	2,060	27
Italy	986	109	10,579	I,404	15,009	2,847	2,870	255	3,057		899'6	I,011	9,475				2;
Source: AIOP																	

Table S/9 – Regional distrib		tient beds	s of the AI	OP-assoc	ated instit	utions ac	cording to	the diffe	ution of patient beds of the AIOP-associated institutions according to the different types of activities and regions. Year	f activitie	es and reg	gions. Ye	ar 2018 (Composition %)	osition %		
	High Specialty	ecialty	Medical	sal	Surgical	Ì	Neuro-psychiatry		Long-stay care	re pts	Rehabilitation	i	RSA (Assisted living homes)	homes)	Total	Į,
Regions	рәңірәлэгү	рэй <i>Б</i> эчээр-поV	Accredited	рәџрәлээр-иоN	Accredited	рәңрәлэгр-иоМ	Accredited	рәңрәлэгр-иоМ	рәңірәлээ ү	рэлірэлээр-иоМ	Accredited	Моп-асстедітед	ұссьефіге <i>ф</i>	рэй <i>Б</i> эчээр-поV	Accredited	рэйБэчээр-поV
 Piedmont 	3.3	2.5	14.6	21.2	25.0	61.6	10.4	7.9	12.0	4.4	19.9	2.5	14.8	٠	100.0	100.0
 Aosta Valley 	•	٠	٠		15.8	0.001			1		84.2	٠		٠	100.0	100.0
 Lombardy 	3.9	4.4	25.1	26.0	26.9	45.3	6.0	4.9	0.1	,	19.2	13.5	23.9	5.9	100.0	100.0
 A.P. of Bolzano 	٠	٠	7.4	12.7	٠	•		,	8.6	34.9	82.8	52.4	,	٠	100.0	100.0
 A.P. of Trento 	٠	٠	28.1	46.9	10.9	,		,	47.9	53.1	7.2	,	0.9	٠	100.0	100.0
- Veneto	0.3	٠	18.0	19.5	24.9	8.8	14.8	10.7	2.9	٠	25.5	21.0	13.6	٠	100.0	100.0
 Friuli V.G. 	1	٠	21.9	14.9	35.6	17.5				٠	25.1	•	17.4	67.5	100.0	100.0
- Liguria	10.7	٠	30.7	39.2	10.7	8.09			,	٠	47.9	٠		٠	100.0	100.0
 Emilia R. 	1.4	0.5	20.4	8.8	29.1	34.9	11.6	0.5	10.9	1.3	17.5	11.3	9.1	42.7	100.0	100.0
- Tuscany	1.4	٠	14.0	1.7	41.8	9.96	7.1	1.7	12.3	٠	23.4	•		٠	100.0	100.0
- Umbria	•	٠	٠		8.99				18.8		7.0	٠	17.5	100.0	100.0	100.0
- Marche	•	•	23.9	٠	33.0	,	5.9	,	13.3	٠	9.11	٠	12.3	٠	100.0	٠
- Lazio	٠	2.7	14.7	20.0	18.1	49.0	6.7	0.3	6.4	2.7	12.8	15.1	41.4	10.1	100.0	100.0
Abruzzo	•	٠	31.6	24.5	37.4	32.4	11.0			٠	16.9	36.7	3.1	6.4	100.0	100.0
- Molise	٠	٠	32.1	34.2	24.8	,		,		٠	43.1	8.59		٠	100.0	100.0
- Campania	1.5	1.5	18.3	30.2	42.5	46.9	8.8	13.8	8.6	6.3	19.1	4.		•	100.0	100.0
- Apulia	5.3	٠	25.6	14.0	23.1	24.3	0.5		2.4	٠	18.5	18.2	24.5	43.5	100.0	100.0
 Basilicata 	•	٠	٠		15.6				4.5		46.4	٠	33.5	٠	100.0	٠
 Calabria 	•	•	11.0	9.1	32.9	6.06		,	9.3	٠	34.4	٠	12.5	٠	100.0	100.0
- Sicily	2.0	1.0	28.6	12.4	41.9	11.9	3.3	11.9	2.3	0.5	14.2	22.2	7.7	40.2	100.0	100.0
- Sardinia	•	•	23.1	٠	49.3	,		,	11.7	٠	15.9	٠		٠	100.0	٠
North	2.7	1.5	21.8	20.1	26.5	9.44	5.9	5.1	5.1	3.1	20.4	11.9	17.5	13.6	100.0	100.0
Center	0.2	5.6	15.0	19.4	22.9	8.64	6.5	9.4	7.8	5.6	13.9	14.6	33.7	10.6	100.0	100.0
South	2.0	0.7	22.6	23.3	36.9	32.8	4.3	6.3	9.6	2.5	8.61	18.4	8.7	16.0	100.0	100.0
Italy	1.9	9.1	20.5	21.0	1.67	42.5	5.6	3.8	5.9	2.7	18.7	15.1	18.3	13.3	100.0	0.001
Source: 410P																

 Table S/10 – Technical and biomedical equipment for diagnosis and treatment in public hospital facilities. Year 2013

																	I
HC	Echo	CT	HD A	CCA	MON	MRI	OT	RU	ΛT	PXU L	LINAC	RCT	AIA	CGC	AM	SI A	4DC
	688	85	1,163	216	3,259	44	267	243	1,042	500	56	115	313	25	629	1,149	111
٠	30	7	27	7	137	3	16	5	39	5	-	٠	16	٠	22	34	4
٠	2,378	180	2,256	373	8,231	119	1,110	595	2,338	406	64	257	652	28	1,276	3,349	230
٠	152	∞	110	15	589	5	54	51	139	30	٠	10	37	33	96	410	15
٠	122	11	162	20	200	5	82	14	209	19	4	6	42	2	70	321	16
١	1,228	85	1,047	198	4,430	65	782	248	2,120	239	27	106	338	24	711	2,072	122
-	345	24	421	89	1,189	13	247	99	4	59	14	22	135	∞	158	989	40
2	413	35	462	45	1,392	29	209	92	463	106	12	34	165	=	240	554	38
-	1,117	88	926	135	3,988	42	740	226	1,540	230	56	83	315	25	754	1,931	9
4	1,225	78	1,204	141	3,886	20	655	236	1,974	183	56	108	515	48	569	1,776	107
٠	290	20	403	39	592	13	139	47	262	41	7	31	185	9	158	341	42
٠	421	36	486	78	1,070	56	185	96	451	63	12	55	183	12	197	479	52
3	1,058	126	1,129	219	4,098	79	601	284	1,392	242	39	183	541	36	804	1,623	200
٠	276	25	434	81	738	11	134	83	299	59	∞	35	137	12	126	279	37
-	26	11	157	49	296	6	52	33	102	23	7	15	32	S	55	143	18
∞	715	68	277	243	2,715	22	459	212	1,028	183	11	120	320	16	879	821	155
2	742	99	1,225	356	2,000	36	384	231	834	146	16	118	361	28	394	780	164
٠	150	15	190	56	498	∞	111	40	179	40	33	28	42	9	98	194	23
٠	251	34	405	79	740	14	138	61	224	59	∞	55	124	7	178	281	53
11	688	106	629	242	3,570	20	547	256	1,169	254	20	137	281	30	702	1,149	182
7	412	33	407	124	957	19	194	82	392	79	10	51	134	15	204	386	46
4	6,770	518	6,604	1,072	23,715	325	3,807	1,530	8,334	1,303	177	989	2,013	156	3,956	0,456	641
7	2,994	260	3,222	477	9,646	168	1,580	663	4,079	529	84	377	1,424	102	1,728	4,219	401
24	3,532	379	4,024	1,200	1,514	169	2,019	1,001	4,227	843	78	529	1,431	119	2,373	4,033	829
35	13,296	1,157	13,850	2,749	14,875	662	7,406	3,194	16,640	2,675	339	1,572	4,868	377	8,057	8,708	1,720
cho-T	omograph	CI:	Computer	ized Axi	al Tomog	graphy, I	ID: Hem	odialysis	s machin	e, ACCA	: Automa	eq		nistry Aı		1ON: Mo	nitor,
	2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	- 988 - 308 - 1,238 - 1,228 - 1,228 - 1,228 - 1,228 - 413 - 2,90 - 421 - 442 - 421 - 421	- 985 85 - 30 2 - 2,378 180 - 152 88 - 152 111 - 1,228 85 1 345 24 4 1,225 78 4 1,225 78 - 290 20 - 421 36 - 276 25 - 776 25 - 150 11 88 715 89 - 2742 66 - 150 15 - 150 15 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 - 251 33 - 251 34 -	88 88 88 88 88 88 88 88 88 88 88 88 88	85 1,163 216 10 2,256 373 216 8 110 15 11 162 20 24 421 68 24 421 68 35 462 45 36 462 45 37 462 45 38 956 135 39 956 135 30 486 78 31 486 78 31 486 78 31 11 157 49 31 15 190 26 31 405 77 31 405 79 31 40	85 1,163 216 3 2 27 2 2 27 2 8 110 15 2 8 110 15 4 24 421 68 1 35 462 45 13 35 462 45 13 36 486 78 1 100 629 242 3 31 405 79 100 100 629 242 3 11 157 49 11 157 49 12 190 26 13 3 407 124 14 3 3 407 124 15 190 26 16 61,225 356 2 17 8 1,000 26 18 9 577 243 2 18 66 1,225 356 2 18 6604 1,072 23 18 6704 1,070 11 18 6704 1,070 11	85 1,163 216 3,259 2	85 1,163 216 3,259 44 5 5 6 6 1,163 216 3,259 44 5 5 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	85 1,163 216 3,259 44 5 2 27 2 137 3 180 2,256 373 8,231 119 1,11 162 20 580 5 11 162 20 580 5 24 421 68 1,189 13 2 24 421 68 1,189 13 2 35 462 45 1,392 29 2 36 486 78 1,392 29 2 27 13 190 26 498 8 11 157 49 296 9 25 434 81 738 11 1 157 49 296 9 26 1,129 219 4,098 79 6 25 434 81 738 11 1 157 243 2,715 22 4 26 1,25 356 2,000 36 3 33 407 124 957 19 1 16 629 242 3,570 50 5 33 407 124 957 19 1 16 669 242 3,570 50 5 318 6,604 1,072 23,715 325 3,8 318 6,604 1,072 23,715 325 3,8 318 6,604 1,072 23,715 325 3,8 318 6,604 1,072 23,715 325 3,8 318 6,604 1,072 23,715 325 3,8 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 11,514 169 2,6 318 6,604 1,072 23,715 169 2,6 318 6,604 1,072 11,	85 1,163 216 3,259 44 5 5 6 6 1,163 216 3,259 44 5 5 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	85 1.163 2.164 3.259 44 5.67 243 1.042 2.29 2	85 1.163 2.16 3.259 44 567 2.24 1.042 2.09 2.09 2.25 2.35 8.21 1.32 3 16 5 3 3 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	85 1,163 216 3,259 44 567 243 1,042 209 29 1 1	85 1,163 216 3,259 44 567 243 1,042 209 29 115 33	85 1.163	85 1.163	85 1.163 2.16 3.259 44 567 243 1.042 209 29 115 313 25 629 1.149 2 349 2 209 2 2 2 2 3 4 2 2 2 3 4 2 2 2 2 3 4 2 2 2 2

MRT: Magnetic Resonance Tomography, OT: Operating Table, RU: Radiological Unit, LV: Lung Ventilator, PXU: Portable X-ray Unit, LINAC: Linear Accelerator, RCT: Remote Controlled x-ray Table, AIA: Automated Immunoassay Analyzer, CGC: Computerized Gamma Camera, AM: Anesthesia Machine, SL: Shadowless Lamp, ADC: Automated Differential Cell counter.

Source: processing by Ermeneia - data from the Ministry of Health

Table S/11 – Technical and biomedical equipment for diagnosis and treatment in accredited healthcare facilities. Year 2013

Table 2/11 Technical and Old	20000	andanka .	10/11	2000	200	3 44 44 44		2	2,22									
Regions	HC	Echo	CT	HD	ACCA	MON	MRI	OT	RU	TL	PXU	LINAC	RCT	AIA	CGC	AM	SI	ADC
- Piedmont	1	119	15	4	27	266	18	65	35	63	30	1	30	31	1	<i>L</i> 9	78	35
 Aosta Valley 	•	-	-	•	-	9	•	7	-	7	-	٠	-	-	•	7	4	_
- Lombardy	10	485	51	185	120	1,406	57	242	154	319	95	16	99	96	9	272	524	99
- A.P. of Bolzano	•	7	2	•	-	27	3	•	4	•	•	7	3	7	•	•	٠	_
 A.P. of Trento 	•	17	3	•	2	Ξ	3	4	7	4	2	٠	4	7	٠	4	∞	4
- Veneto	•	63	∞	٠	13	148	13	35	25	19	12	•	10	21	٠	32	4	14
 Friuli Venezia Giulia 	•	35	9	25	∞	51	5	20	6	13	7	•	5	9	•	20	25	9
Liguria	•	∞	•	2	4	27	•	7	4	16	4	٠	4	3	٠	6	11	4
 Emilia Romagna 	-	184	22	72	31	429	32	125	58	185	50	3	41	28	3	146	218	25
- Tuscany	1	72	10	25	56	225	7	29	28	91	24	4	18	13	•	72	95	21
- Umbria	•	∞	2	•	4	37	2	15	9	10	6	٠	5	7	٠	16	15	3
- Marche	•	20	∞	٠	15	92	∞	27	21	30	13	٠	12	22	-	30	47	10
- Lazio	-	145	38	475	29	547	31	4	96	125	4	4	2	89	∞	14	200	69
- Abruzzo	•	57	10	10	20	208	13	31	17	61	14	٠	19	21	٠	33	53	13
- Molise	•	6	3	-	5	14	-	4	4	4	3	٠	4	3	7	9	9	33
 Campania 	Э	210	52	09	70	268	21	198	101	220	72	4	65	69	17	237	267	79
- Apulia	•	130	22	146	52	362	13	9/	42	132	37	7	34	41	7	74	130	35
- Basilicata	٠	2	-	٠	-	8	-	7	-	٠	-	٠	-	1	٠	4	2	_
Calabria	•	93	18	æ	33	218	10	99	36	86	25	7	56	27	9	75	95	31
- Sicily	2	188	47	16	66	467	32	167	88	194	65	9	62	53	∞	193	233	67
- Sardinia	٠	47	9	1117	16	9/	9	36	12	25	12	٠	10	12	٠	36	39	6
North	12	919	108	288	207	2,371	131	494	297	621	201	22	164	190	10	552	912	156
Center	-	275	28	200	112	901	48	253	151	256	110	∞	66	105	6	262	357	103
South	5	736	159	353	596	1,921	26	280	301	734	229	14	221	227	35	859	825	238
Italy	I8	1,930	325	I, I4I	615	5,193	276	1,327	749	1,611	540	44	484	522	54	1,472	2,094	497
HC: Hyperbaric Chamber, Echo: Echo-Tomography,	o: Echo	-Tomogra		: Compu	erized A	xial Tom	ography,	HD: He	nodialys	is machin	ne, ACC	CT: Computerized Axial Tomography, HD: Hemodialysis machine, ACCA: Automated	nated Cli	Clinical Ch	Chemistry /	Analyzer,	MON:	Monite

MRT: hyperbane channed, Educ Echo-Follogiaphy, Cl.: Computedized Axia Follogiaphy, ID: remodraysis machinic, ACCA-, Augustae Chinea Chemisty Analyzet, MOT: Anomore MRT: Magnetic Resonance Tomography, OT: Operating Table, RU: Radiological Unit, LV: Lung Ventilator, PXU: Portable X-ray Unit, LINAC: Linear Accelerator, RCT: Remote Controlled x-ray Table, AIA: Automated Immunoassay Analyzer, CGC: Computerized Gamma Camera, AM: Anesthesia Machine, SL: Shadowless Lamp, ADC: Automated Differential Cell counter. Source: processing by Ermeneia – data from the Ministry of Health

Table S/12 – Technical and biomedical equipment for diagnosis and treatment in non-accredited healthcare facilities. Year 2013

$1abe\ 5/12 - 1$ ecritical and biomedical equipment for angliosis and frequential fortact eatred relations $1ab$	nomenica	andinha n	ni Jor an	18HOSES C	ma nean	nen m	חו-מרכז בי	nau naun	uncare	actitites.	Iem zo	77						Ì
Regions	HC	Echo	CL	HD	ACCA	MON	MRI	OT	RU	AT	PXU	LINAC	RCT	AIA	CCC	AM	SI	ADC
- Piedmont		79	4	1	4	99	2	28	15	16	5		4	3		31	35	5
- Lombardy	٠	56	4	-	5	80	3	34	16	31	Ξ	٠	5	3	7	39	54	7
- A.P. of Bolzano	•	5	7	٠	٠	38	7	6	∞	4	5	٠	-	٠	٠	6	10	1
- A.P. of Trento	٠	٠	•	•	٠	•	•	•	•	1	•	٠	•	٠	•	•	,	
- Veneto	•	•	٠	٠	٠	3	٠	3	•	•	_	٠	•	٠	٠	7	3	
 Friuli Venezia Giulia 	٠	•	٠	•	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	•	,	٠	,
- Liguria	٠	5	7	•	٠	23	-	10	3	7	5	٠	7	٠	•	∞	11	-
 Emilia Romagna 	•	10	7	٠	7	19	_	10	7	3	3	٠	7	7	•	10	22	_
- Tuscany	٠	20	3	-	7	14	7	12	4	7	3	-	7	_	-	11	11	7
- Umbria	٠	2	•	•	٠	7	•	3	•	_	•	٠	•	٠	•	7	7	
Marche	٠	٠	٠	٠	٠	٠	٠		٠	٠	٠	٠	٠	٠	٠	٠		
- Lazio	٠	101	24	71	27	267	17	107	40	116	41	4	27	24	5	130	164	40
- Abruzzo	٠	٠	•	•	٠	•	•	٠	•	1	•	٠	•	٠	•	•	,	
- Molise	٠	٠	٠	٠	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	٠		
- Campania	٠	11	3	٠	2	20	٠	16	3	17	3	-	3	3	٠	15	20	4
- Apulia	٠	•	٠	•	٠	٠	٠	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	
 Basilicata 	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	•	,
Calabria	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	
- Sicily	•	•	•	•	1	2	•	-	•	1	1	1	•	•	•	7	1	,
- Sardinia	٠	٠	٠	•	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	٠		
North	٠	75	4	7	11	219	6	94	44	99	30	٠	14	∞	7	66	135	15
Center	•	123	27	72	59	283	19	122	4	124	4	5	56	25	9	143	177	45
South	٠	11	3	•	7	22	٠	17	3	18	З	-	3	3	•	17	21	4
Italy	٠	209	44	74	42	524	28	233	16	861	77	9	46	36	~	259	333	19
HC. Hynerhanic Chamber E	cho. Echo	ho: Echo_Tomography (T. Committerized A vial Tomography	nhy CT.	Commit	A berire	vial Tom	Adream	HD. Har	nodialize	HD: Hemodialysis machine	JU P	ACCA. Automoted Clinical	noted Cli	inical Ch	Chemistry Analyzer	noluzer	MON. Monitor	Conitor

HC: Hyperbaric Chamber, Echo: Echo-Tomography, CT: Computerized Axial Tomography, HD: Hemodialysis machine, ACCA: Automated Clinical Chemistry Analyzer, MON: Monitor, MRT: Magnetic Resonance Tomography, OT: Operating Table, RU: Radiological Unit, LV: Lung Ventilator, PXU: Portable X-ray Unit, LINAC: Linear Accelerator, RCT: Remote Controlled x-ray Table, AIA: Automated Immunoassay Analyzer, CGC: Computerized Gamma Camera, AM: Anesthesia Machine, SL: Shadowless Lamp, ADC: Automated Differential Cell counter. Source: processing by Ermeneia – data from the Ministry of Health

2. Activity data

2.1. In-hospital days and patient bed occupancy rate

The data in Table S/13, which, once again relate to 2013, due to the already mentioned lack of updated Ministerial data, confirms the gradual but progressive decline of the allocations of available patient beds in the hospital system, which went from nearly 220,000 in 2009 to 199,000 in 2013, a decrease of -9.3%. This decrease seems to have affected the accredited private component slightly more (-9.7%), than the public component (-9.2%) as shown by the data in Table S/14. Values updated to 2016 on the availability of patient beds can however be deduced from the Section on facility data (Tab. S/5).

The Tables also describe the continuous decrease in hospitalization days, which went from 62 million in 2009 to 56 million in 2013, with a decrease of -10%, which for public facilities was -10.1%, and for private facilities was -9.6%, the latter still penalized by regional policies of lower budgets for accredited hospitals.

Table S/15 shows a comparison of the 2013 in-hospital stay values with the previous year.

The average overall length of stay remained constant at 8 days and was higher for accredited private healthcare facilities (9 days): the value shown in Table S/15 is mainly due to the influence of long-stay care and rehabilitation. The data changes when considering acute patient cases: in fact, Table S/16 shows that it is down to 7.1 days for public facilities and Table S/18 shows a number of 5.4 days for private facilities.

The overall patient bed occupancy rate, again displayed in Table S/15, was 77% in 2013, consistent with that of the previous year (77.1%).

If we consider only the acute case admissions, the average length of stay remained substantially unchanged in 2013 for both public facilities (Table S/16) and private facilities (Table S/18). At the same time, the occupancy rate tended to decrease for both types of operators (Table S/18).

2.2. Types of admissions and discharges

A more updated situation of in-hospital days and treated cases may also be deduced from the calculation of hospital discharge records (SDO, Schede di Dimissione Ospedaliera), for which a 2016 consolidated version is available.

These calculations, based again on the CMS 24.0 version of the Medicare DRGs adopted since 2009, provide a very detailed picture of the different service provider components of the National Health Service, along with some of complexity and performance indicators. The results are shown both for the totality of the healthcare institutions, and for AIOP-affiliated facilities, for which a more recent 2017 update is available.

Tables S/20 and S/21 show that over 9,000,000 patients were treated in 2016, of which almost 1.5 million (i.e. 16%) were from accredited and non-accredited private healthcare facilities. It should be recalled that since 2009 the Ministry of Health has incorporated the so-called private obligatorily affiliated institutions (otherwise known as 'publicly assimilated' institutions), such as private polyclinics, private research hospitals (IRCCS), private foundations, religiously affiliated classified hospitals, USL facilities and research facilities, into the column of private data in Table S/20 creating a new 'expanded private' sector which accounts for almost 28.5% of the overall supply in 2016.

The number of in-hospital days for inpatient admissions breaks down to 37 million for public facilities and 14.3 million for the 'expanded private' facilities, whereas the volume of day hospital admissions is 4.5 million and 1.4 million, respectively.

The total of in-hospital days and day admissions for accredited and non-accredited private healthcare facilities alone amounts to nearly 11 million, with a ratio of 18% of the total, compared to 17.5% in 2012.

The total data in Table S/20 also includes discharges (more than 363,000) and in-hospital days (more than 1.1 million) related to DRG 491 (normal newborns) that the Ministry of Health does not report in subsequent tables by type of institution.

The number of discharged patients and in-hospital days given by type of institution, type of activity and admissions shows a greater proportional contribution by private hospitals (accredited healthcare facilities) relating to rehabilitation and long-stay care (see Tables S/21 and S/22).

2.3. Prevalent DRGs

The examination carried out on the 2016 hospital discharge records data allows us to observe the activity of the entire hospital sector with no breakdown between public and private operators (Table S/23), while AIOP's regional offices have collected data relating to the part of those activities performed by AIOP-associated facilities, offering a preview of the 2017 results (Table S/24).

The tables mentioned display the top 60 DRGs as they relate to number of discharges for inpatient admissions for acute cases for all hospitals and private hospitals (accredited healthcare facilities), respectively. A North, Central, and South territorial breakdown is also provided for the latter (Tables S/25, S/26 and S/27).

Table S/28 illustrates in-hospital stay activity for acute patients receiving day hospital treatment in public and private healthcare institutes, with reference to the 30 most frequent DRGs. Tables S/29 and S/30 show the DRG classifications of patients who made use of rehabilitation treatment in public and private hospitals as a whole (2016) and, more specifically, in AIOP private hospitals (accredited private healthcare facilities) (2017).

At the combined public/private level, the most common DRG is still childbirth with 283,818 discharges in 2016 (compared to 316,958 units in 2012) amounting to 4.5% of cases (4.6% in 2012) (Table S/23).

On the other hand, in private hospitals (accredited private healthcare facilities) even during 2016, first place was occupied by major joint replacements or lower extremity replantation (57,968 cases, accounting for 8.4% of the sector total).

For the comparison of complexity indicators (average weight and casemix index) for public institutions and accredited private healthcare facilities, please refer to the specific section of Part One of the Report.

2.4. Activities classified according to major diagnostic categories

Tables S/31 to S/35 contain a more aggregated classification of the same data relating to the analysis of hospital discharge records contained in the tables above, displayed in terms of the Major Diagnostic Categories (MDC) of DRGs, as reported in the hospital discharge records (SDO) of the Ministry of Health.

In inpatient admissions for acute cases, once again illnesses and disorders of the cardiovascular system stand out with 919,182 cases in 2016, compared

to 997,698 cases recorded in 2012, and for illnesses and disorders of the musculoskeletal system and connective tissue, with 806,091 cases in 2016 (compared to 849,420 in 2012), as shown by the data in Table S/31.

The greatest average hospital stay (well above the 6.9 days general total) is that for Pre MDC (35.3 days), HIV infections (16.7 days), multiple major trauma (14.2 days), burns (13.3 days), again as shown in Table S/31.

Day hospital activities for acute cases once again display illnesses and disorders of the musculoskeletal system and connective tissue (248,788 cases) (Table S/32).

Rehabilitation activities for inpatient admissions were greatest among illnesses and disorders of the musculoskeletal system and connective tissue (with 143,710 cases), followed by illnesses and disorders of the nervous system (with 73,237 cases) and illnesses and disorders of the cardiovascular system (with 47,337 cases), as shown in Table S/33.

Day hospital admissions for rehabilitation (Table S/34) show a greater concentration for the same diagnostic categories than inpatient admissions, although in a different order: in first place are illnesses and disorders of the nervous system (12,020 cases), second place are illnesses and disorders of the musculoskeletal system and connective tissue (6,348 cases), and finally the cases that fall within the MDC Factors influencing health status and use of health services (5,981 cases).

2.5. Activities classified according to specialty

The variable of making classifications by clinical specialty – which is an interesting method for analyzing the data of hospital facility activities and is regularly shown as such in Table nos. S/36 to S/60 – is again affected by the lack of updated Ministerial data for 2014.

All of the information and related indicators keep providing a kind of real database, again with reference to the year 2013, to be used for information and/or further analysis, since we compare the results of the total activities of the various accredited healthcare facilities to those specifically registered with AIOP both at the national level (Table S/36) and at the level of the individual Regions (Tables S/37 to S/57).

The data are then re-aggregated and divided for large areas of the country (Tables S/58, S/59 and S/60).

2.6. Patient mobility

The final topic of this section is represented, as in several past editions of the Report, by the aspects more properly connected with the characteristics of the hospitalization demand expressed by citizens in correlation with their perception of the quality of care offered by the Regional Health Services; a different and no less interesting interpretation of data on hospital production illustrated in the sections above. In this case, the analysis focuses on the dynamics of inter-regional patient flows, developed on the basis of data received from Ministerial mobility matrices.

The analysis of inter-regional healthcare mobility in fact, in addition to playing a key role as a tool for regional planning, helps us to assess, among other things, the propensity of citizens to make use of the principle of free choice that should be guaranteed by our system.

Table S/61 gives us a picture of the temporal evolution of this propensity, expressing it in terms of synthetic indices of attraction and flight over the last five years available, all completed by a final column showing the most recent net balance of the flow of acute patients entering and leaving their respective territorial areas.

The data extrapolated from the inter-regional mobility matrices taken from the hospital discharge records, this year updated to 2016, show the traditional inflow trend in regions such as Lombardy, constantly in the lead in this ranking with numbers exceeding 75,000 units, Emilia Romagna, Tuscany, Veneto, Umbria, and Friuli Venezia Giulia. Also appearing to be confirmed is the marked tendency to receive hospital care from other regional systems, evidently considered more reliable and more accessible, shown over time by the people of Campania, Calabria, Sicily, Abruzzo, Lazio, and Sardinia.

The phenomenon of mobility, as has often been pointed out, continues to be a sensitive topic in the debate on the reorganization of the hospital network, as is that of the freedom to choose the place for treatment. All of this increasingly motivates some Regions to sign agreements with the health systems of neighboring areas (but not only) in order to bring the flows of patients under control. The State-Regions Conference has heavily intervened to guide the behavior of the most attractive regions, cutting the financial allocation by 50% relative to the increases in flows recorded in the two-year period 2014-2015 in the accredited sector, and by 60% relative to those documented in 2016. Regional AIOP presidents were also solicited on this sensitive topic, in order to consider the financial stability of many accredited centers and to gain an understanding of the feelings of citizens and to assess the impact on incoming mobility flows.

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		2009			2010			2011			2012			2013	
	Patient	. ~		Patient	In-hospital	O.R.	Patient	In-hospital	O.R.		In-hospital	O.R.		In-hospital	O.R.
	peds			beds	days	%	beds	days	%		days	%		days	%
Public	172,718	50,836,854	9.08	168,926	50,114,576	81.3	166,544	48,492,926	8.62	161,653	47,155,798	6.62	156,762	45,685,829	8.62
Accred, private	46,686			45,622	10,945,990	65.7	44,487	10,688,865	65.8		10,422,856	66.5		10,202,409	69.3
Total	219,404			214,548	61,060,566		211,031	59,181,791			57,578,654			55,888,238	
	%			%	%		%	%			%			%	
Public	78.7			78.7	82.1		6.87	81.9			81.9			81.7	
Accred. private				21.3	17.9		21.1	18.1			18.1			18.3	
Total				0.001	100.0		100.0	0.001			100.0			100.0	

Source: processing by Ermeneia of data contained in the Report "Attività gestionali ed economiche delle Usl e Aziende Ospedaliere", Ministry of Health, Years 2009, 2010, 2011, 2012 Total

Table S/14 – Annual increase of activity, patient beds, and in-hospital days

	2010	2010/2009	2011/201	2010	2012/201	2011	2013/2012	2012	2013/2009	600
	Patient beds	In-hospital days								
Public	-2.2	-1.4	-1.4	-3.2	-2.9	-2.8	-3.0	-3.1	-9.2	-10.1
Accred, private	-2.3	-3.0	-2.5	-2.3	-3.4	-2.5	-1.9	-2.1	-9.7	9.6-
Total	-2.2	-1.7	-1.6	-3.1	-3.0	-2.7	-2.8	-2.9	-9.3	-10.0

Source: processing by Ermeneia of data contained in the Report "Attività gestionali ed economiche delle Usl e Aziende Ospedaliere", Ministry of Health, Years 2009, 2010, 2011, 2012 and 2013

Table S/15 – Public and accredited private institutions – Activity data for inpatient admissions. Year 2013

			2013			20	2012
Type of institution	Patient beds	Discharged pts	Days	Average length of stay	Occupancy rate %	Average length of stay	Occupancy rate %
 Total public and assimilated institutions 	156,762	5,879,708	45,685,829	7.8	8.67	7.8	79.9
 Private accredited healthcare facilities 	42,142	1,136,424	10,202,409	0.6	66.3	9.0	66.5
Total public and accredited private institutions	198,904	7,016,132	55,888,238	8.0	77.0	8.0	77.1
Source: processing by Frmeneia - data from the Mi	inistry of Health						

Table 8/16 — Activities of acute hospital-stay (*) in public hospital facilities, by region. Year 2013 and comparison with the year 2011

					2013			1100	
	Patient beds				C107			1107	
Regions	actually used	Admissions	In-hospital days	Average length	Occupancy rate	In-hospital days Average length Occupancy rate Hospitalization rate		Occupancy rate	Average length Occupancy rate Hospitalization rate
				ofstay	(%)	$(per\ I,000\ inhab.)$	of $stay$	(%)	$(per\ I,000\ inhab.)$
 Piedmont 	10,758	383,198	2,925,216	9.7	74.5	9.78	7.7	77.8	93.4
 Aosta Valley 	428	14,748	113,033	7.7	72.4	115.4	8.4	78.7	114.1
 Lombardy 	23,621	962,330	6,837,352	7.1	79.3	98.3	7.2	80.9	104.5
 A.P. of Bolzano 	1,616	63,819	431,025	8.9	73.1	125.2	6.7	76.5	131.1
 A.P. of Trento 	1,315	47,295	364,855	7.7	76.0	89.2	7.7	97.4	137.3
- Veneto	13,021	448,061	3,614,343	8.1	76.0	91.8	8.1	76.1	95.8
 Friuli V.G. 	3,653	130,320	970,378	7.4	72.8	106.7	7.6	70.8	107.9
 Liguria 	4,408	169,053	1,340,071	7.9	83.3	108.0	8.4	62.7	103.7
 Emilia R. 	11,295	471,636	3,100,207	9.9	75.2	107.7	6.7	76.2	112.9
 Tuscany 	9,251	384,296	2,506,923	6.5	74.2	104.1	9.9	76.3	111.2
Umbria	2,353	109,501	699,612	6.4	81.5	123.6	6.2	82.9	127.6
Marche	3,886	149,203	1,102,798	7.4	7.77	9.96	7.3	77.8	107.7
Lazio	13,042	526,590	3,937,499	7.5	82.7	94.8	7.7	82.8	92.1
Abruzzo	3,033	123,541	899,763	7.3	81.3	94.1	7.3	85.7	100.1
Molise	824	36,977	262,997	7.1	87.4	118.0	7.1	9.68	131.5
 Campania 	668'6	433,646	2,911,759	6.7	9.08	75.2	9.9	76.5	78.6
- Apulia	8,989	413,949	2,766,050	6.7	84.3	102.2	9.9	9.08	111.8
 Basilicata 	1,422	55,805	385,415	6.9	74.3	6.96	6.9	70.3	100.7
 Calabria 	3,126	135,084	921,315	8.9	80.7	0.69	8.9	76.1	9.08
Sicily	6,697	405,120	2,811,350	6.9	79.4	81.0	8.9	79.8	87.0
 Sardinia 	4,528	163,203	1,119,198	6.9	67.7	99.5	7.0	70.4	109.9
North	70,115	2,690,460	19,696,480	7.3	77.0	98.3	7.5	77.1	103.8
Center	28,532	1,169,590	8,246,832	7.1	79.2	100.1	7.1	6.62	102.9
South	41,518	1,767,325	12,077,847	8.9	7.67	85.7	8.9	78.1	95.6
Italy	140,165	5,627,375	40,021,159	7.1	78.2	94.3	7.2	78.0	99.7
(*) The following specialt	ecialties are exclude	ed: 22 – Residua	I mental health faci	lities, 28: Spinal	care unit, 56 – Fu	cies are excluded: 22 - Residual mental health facilities. 28: Spinal care unit, 56 - Functional recovery and rehabilitation, 60 - Long-stay care pts, 75 - Neurologica	ehabilitation, 60	- Long-stay care	pts, 75 - Neurological

Note: latest Ministry data available at the date of publication of the Report. Source: data from the Ministry of Health (*) I ne rollowing sperenda (*) rehabilitation.

Table S117 — Activities of non-acute hospital stay (*) in public hospital facilities, by region. Year 2013 and comparison with the year 2011

Table 3/1/ - Activities C	unie $3/1/$ – Activities of non-active nospital stay () in public nospilal jacili	in public nospital Jacinites, by region. Tear 2013 and comparison with the year 2011.	на сотранзон мин	me year 2011		
	- 1 - 1 - 1 - 1 - 1 - 0			75	2013	7(2011
Regions	Fanent beas actually used	Admissions	In-hospital days	Average length of stay	Occupancy rate (%)	Average length of stay	Occupancy rate (%)
Piedmont	2,144	23,173	909'959	28.3	83.9	29.0	6.68
 Aosta Valley 	25	157	3,895	24.8	42.7		
Lombardy	3,800	52,018	1,267,088	24.4	91.4	23.9	9.68
 A.P. of Bolzano 	78	1,051	19,973	19.0	70.2	23.2	87.8
 A.P. of Trento 	101	1,256	37,691	30.0	102.2	29.4	125.3
- Veneto	2,178	26,666	677,600	25.4	85.2	25.8	84.2
Friuli V.G.	304	4,193	111,995	26.7	100.9	28.7	90.5
Liguria	803	12,895	251,428	19.5	85.8	21.6	69.1
 Emilia Romagna 	1,931	26,408	855,464	32.4	121.4	35.4	122.6
- Tuscany	530	6,860	161,169	23.5	83.3	21.4	82.7
- Umbria	276	3,719	95,109	25.6	94.4	24.5	6.06
Marche	494	7,411	138,688	18.7	6.97	24.3	76.5
- Lazio	1,239	11,842	424,752	35.9	93.9	42.3	94.8
Abruzzo	268	3,630	61,380	16.9	62.7	16.8	61.8
- Molise	171	1,732	50,554	29.2	81.0	32.9	82.4
Campania	405	4,454	129,588	29.1	87.7	28.1	82.9
– Apulia	714	8,397	209,416	24.9	80.4	26.0	61.1
Basilicata	223	2,110	60,327	28.6	74.1	35.4	67.4
Calabria	09	1,128	17,700	15.7	80.8	18.6	65.0
Sicily	953	6,867	249,427	36.3	71.7	42.6	73.5
 Sardinia 	122	995	36,923	37.1	82.9	35.1	65.5
North	11,364	147,817	3,881,740	26.3	93.6	27.2	93.7
Center	2,539	29,832	819,718	27.5	88.5	30.7	88.8
South	2,916	29,313	815,315	27.8	9.9/	28.4	0.69
Italy	16,819	206,962	5,516,773	26.7	89.9	27.8	88.7
(*) The following spec	ialties are included: $22 - R_0$	esidual mental health facili	*) The following specialties are included: 22 - Residual mental health facilities, 28: Spinal care unit, 56 - Functional recovery and rehabilitation, 60 - Long-stay care pts, 75 - Neurologica	- Functional recover	y and rehabilitation,	60 - Long-stay care	ots, 75 – Neurological

(*) I ne rollowing sperenda rehabilitation.

Note: latest Ministry data available at the date of publication of the Report. Source: data from the Ministry of Health

Table S/18 – Activities of acute hospital-stay (*) in private hospitals (accredited healthcare facilities), by region. Year 2013 and comparison with the year 2011

	mudson smen fo				. (. (
	Dationt hade				2013			2011	
Regions	actually used	Admissions	In-hospital days Average length of stav	Average length of stav	Occupancy rate (%)	Hospitalization rate (per 1,000 inhab.)	Average length of stav	Occupancy rate (%)	Hospitalization rate (per 1,000 inhab.)
Piedmont	940	36,410	142,188	3.9	41.4	8.3	8.4	41.5	8.8
 Aosta Valley 	10	772	1,324	1.7	36.3	6.0			
 Lombardy 	4,477	205,325	971,421	4.7	59.4	21.0	4.8	60.5	20.9
 A.P. of Bolzano 	31	741	7,658	10.3	67.7	1.5	12.7	9.89	2.9
 A.P. of Trento 	104	2,808	18,671	9.9	49.2	5.3	6.5	53.2	5.3
- Veneto	735	17,888	202,534	11.3	75.5	3.7	11.0	82.2	4.1
 Friuli V.G. 	332	7,568	39,963	5.3	33.0	6.2	0.9	28.3	5.0
 Liguria 	09	1,724	9,370	5.4	42.8	1:1	6.1	57.2	6.0
 Emilia R. 	2,619	89,847	507,984	5.7	53.1	20.5	0.9	55.1	21.8
 Tuscany 	972	33,368	171,332	5.1	48.3	0.6	5.5	43.2	8.5
- Umbria	181	6,018	17,707	2.9	26.8	8.9	3.0	25.8	7.1
Marche	448	18,250	85,744	4.7	52.4	11.8	5.0	53.4	12.2
- Lazio	2,464	76,876	494,196	6.4	54.9	13.8	7.6	62.1	14.8
Abruzzo	555	22,631	129,796	5.7	64.1	17.2	5.8	55.4	14.2
Molise	80	2,672	14,725	5.5	50.4	8.5	0.9	53.3	8.3
 Campania 	4,305	177,900	1,002,651	5.6	63.8	30.8	5.7	2.99	34.7
- Apulia	1,591	80,092	364,028	4.5	62.7	19.8	4.6	62.7	20.9
 Basilicata 	20	1,640	5,653	3.4	31.0	2.8	3.6	18.5	1.6
 Calabria 	902	35,529	172,291	4.8	52.3	18.1	5.4	47.9	22.8
Sicily	2,918	92,294	520,289	5.6	48.9	18.5	5.5	49.7	21.0
 Sardinia 	780	21,713	108,395	5.0	38.1	13.2	5.6	35.1	13.9
North	9,308	363,083	1,901,113	5.2	56.0	13.3	5.5	57.0	13.5
Center	4,065	134,512	768,979	5.7	51.8	11.5	9.9	55.0	11.9
South	11,181	434,471	2,317,828	5.3	56.8	21.1	5.4	9.99	23.2
Italy	24,554	932,066	4,987,920	5.4	55.7	15.6	5.6	56.5	16.6
(*) The following specialt		ed: 22 – Residu	al mental health fac	lities, 28: Spinal c	are unit. $56 - F$	ies are excluded: 22 – Residual mental health facilities. 28: Spinal care unit. 56 – Functional recovery and rehabilitation. 60 – Long-stay care pts. 75 – Neurologica	rehabilitation, 60) – Long-stay care	ots, 75 - Neurological

rehabilitation.

Note: latest Ministry data available at the date of publication of the Report.

Source: data from the Ministry of Health

Table 8/19 — Activities of non-acute hospital stay (*) in private hospitals (accredited healthcare facilities), by region. Year 2013 and comparison with the year 2011

	/ / /						
	"F - 7 ; U			2013	13	2011	II
Regions	raneth beas	Admissions	In-hospital days	Average length	Occupancy rate	Average length	Occupancy rate
	actuatty usea			of stay	(%)	of stay	(%)
 Piedmont 	2,405	21,461	640,642	29.9	73.0	32.7	66.3
 Aosta Valley 	64	770	15,461	20.1	66.2	22.3	58.0
 Lombardy 	3,427	49,357	1,161,323	23.5	92.8	23.9	93.4
- A.P. of Bolzano	231	3,610	88,334	24.5	104.8	24.9	99.1
 A.P. of Trento 	428	7,534	167,329	22.2	107.1	23.0	100.1
- Veneto	423	5,820	130,250	22.4	84.4	22.3	90.2
 Friuli V.G. 	96	895	19,428	21.7	55.4	21.9	68.4
Liguria	123	2,868	31,530	11.0	70.2	12.9	75.2
 Emilia Romagna 	1,697	27,072	594,658	22.0	0.96	22.4	9.7.6
- Tuscany	583	7,059	178,227	25.2	83.8	22.8	74.9
- Umbria	32	495	5,966	12.1	51.1	12.7	57.7
Marche	415	4,191	130,940	31.2	86.4	30.8	88.4
- Lazio	1,953	21,573	641,686	29.7	0.06	34.4	82.7
Abruzzo	445	5,476	138,376	25.3	85.2	26.9	81.6
Molise	09	479	11,702	24.4	53.4	29.7	73.7
 Campania 	1,406	10,051	356,451	35.5	69.5	38.1	85.8
- Apulia	694	8,847	205,265	23.2	81.0	22.5	81.6
 Basilicata 	66	915	31,506	34.4	87.2	33.7	50.8
Calabria	792	6,962	186,716	26.8	64.6	31.5	73.1
- Sicily	662	11,589	253,668	21.9	87.0	21.5	81.6
 Sardinia 	224	3,090	60,282	19.5	73.7	20.9	69.4
North	8,894	119,387	2,848,955	23.9	87.8	24.5	6.98
Center	2,983	33,318	956,819	28.7	87.9	31.4	81.9
South	4,519	47,409	1,243,966	26.2	75.4	27.3	79.8
Italy	16,396	200,114	5,049,740	25.2	84.4	26.5	83.9
(*) The following specialtie	_ CC-behulagi eae se	Residual mental health facilitie	5 78. Spinal care unit 56	Functional recovers	and rehabilitation	n eres yets-puo I – 09	te 75 Neurological

(*) The following specialties are included: 22 - Residual mental health facilities, 28: Spinal care unit, 56 - Functional recovery and rehabilitation, 60 - Long-stay care pts, 75 - Neurological rehabilitation.

Note: latest Ministry data available at the date of publication of the Report. Source: data from the Ministry of Health

Table 8/20 - Hospital Discharge Records (SDO): recorded activity, national grand total, and totals for public and private institutions - Discharged pts and in-hospital days. Year 2016

	4.7	tumoet of cases			transce of days	
	Public	Private	Total	Public	Private	Total
 Inpatient admissions for acute cases 	4,793,135	1,493,137	6,286,272	35,086,253	8,074,400	43,160,653
 Day hospital for acute cases 	1,404,336	546,679	1,951,015	4,292,927	1,055,255	5,348,182
 Rehabilitation for inpatient admissions 	78,847	239,512	318,359	1,963,871	6,249,805	8,213,676
 Rehabilitation – Day hospital 	13,090	18,841	31,931	155,990	315,121	471,111
- Long-stay care	54,073	50,721	104,794	1,377,180	1,513,599	2,890,779
 Normal newborns⁽¹⁾ 	289,268	74,222	363,490	881,507	225,278	1,106,785
Total	6,632,749	2,423,112	9,055,861	43,757,728	17,433,458	981,161,19

Private institutions: Private Polyclinics, Private LR.C.C.S. and Private Foundations, Classified Hospitals, USL Facilities, Research Facilities, Accredited Private Healthcare Facilities. Public institutions: Hospital Centers, University Hospital Centers and Public Polyclinics, Public I.R.C.C.S. and Public Foundations, Directly Managed Hospitals. The item "Long-stay care" includes discharged pts from inpatient admissions and day-hospital. (1) Classified in the DRG 391.

Source: data from the Ministry of Health - SDO 2016

Table S/21 – Distribution of discharged pts classified according to type of institution, activity, and admissions. Year 2016

		¥	4cure			кенаршап	ntanon			
Type of institution	Inpatient admission	lmissions	Day hospital	pital	Inpatient admissions	missions	Day hospita	ipital	Long-term care	care
	Number	%	Number	%	Number	%	Number	%	Number	%
 Public institutions and equivalents 	5,365,416	85.3	1,652,056	84.7	149,643	47.0	21,966	8.89	55,944	53.4
 Private hospitals (accredited healthcare facilities) 	864,778	13.8	290,024	14.9	168,650	53.0	6,965	31.2	48,401	46.2
 Private healthcare facilities 	56,078	6.0	8,935	0.4	99	0.0	٠	0.0	449	0.4
Total	6,286,272	100.0	1,951,015	100.0	318,359	0.001	31,931	100.0	104,794	100.0
Source: data from the Ministry of Health = SDO 2	9102 C									

Table S/22 – Distribution of in-hospital days classified according to type of institution, activity, and admissions. Year 2016

		Acute	e			Kehabilit	ation			
Type of institution	Inpatient admissions	ssions	Day hospita	tal	Inpatient admission	issions	Day hospital	ital	Long-term care	care
•	Number	%	Number	%	Number	%	Number	%	Number	%
 Public institutions and equivalents 	38,705,801	2.68	4,850,652	2.06	3,982,398	48.5	279,180	59.3	1,429,058	49.4
 Private hospitals (accredited healthcare facilities) 	4,274,034	6.6	488,070	9.1	4,229,904	51.5	191,931	40.7	1,451,247	50.2
 Private healthcare facilities 	180,818	0.4	9,460	0.2	1,374	0.0	•	0.0	10,474	0.4
Total	43,160,653	100.0	5,348,182	100.0	8,213,676	100.0	471,111	100.0	2,890,779	100.0
OUD 1111 J J	2100									

Source: data from the Ministry of Health - SDO 2016

Table \$/23 — Total number of public and private healthcare facilities: top 60 DRGs according to the number of discharges (DRG Version 24.0) — Inpatient admissions for acute cases. Year 2016

			ρiO	Discharges		-uI %	Anorago
Dank			3	cuai Sco		Logarital	lancel
Kank		DXG	Number	%	% cumul.	nospitai days	length of stay
-	373	Vaginal Delivery W/O Complicating Diagnoses	283,818	4.5	4.5	2.3	3.4
2	127	Heart Failure & Shock	180,584	5.9	7.4	3.9	9.3
3	5 4	Major Joint Replacement or Reattachment of Lower Extremity	164,483	5.6	10.0	3.3	8.5
4	371	Cesarean Section W/O Cc	148,904	2.4	12.4	1.6	4.6
5	087	Pulmonary Edema & Respiratory Failure	145,624	2.3	14.7	3.3	8.6
9	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	609,86	1.6	16.3	8.0	3.6
7	014	Intracranial Hemorrhage Or Cerebral Infarction	91,845	1.5	17.7	2.1	10.0
∞	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	81,407	1.3	19.0	0.7	3.5
6	430	Psychoses	80,370	1.3	20.3	2.5	13.2
10	680	Simple Pneumonia & Pleurisy Age >17 W Cc	76,597	1.2	21.5	2.0	11.1
=	316	Renal failure	75,079	1.2	22.7	1.7	9.6
12	576	Septicemia W/O Mv 96+ Hours Age >17	66,248	1:1	23.8	2.0	13.1
13	311	Transurethral Procedures W/O Cc	65,738	1.0	24.8	0.5	3.4
14	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	64,626	1.0	25.8	0.5	3.3
15	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	00,00	1.0	26.8	1.0	7.3
16	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	56,700	6.0	27.7	0.7	5.0
17	503	Knee Procedures W/O Pdx Of Infection	51,247	8.0	28.5	0.2	1.8
18	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	50,949	8.0	29.3	8.0	9.9
19	390	Neonate W Other Significant Problems	50,753	8.0	30.1	0.5	4.0
20	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	50,672	8.0	30.9	0.5	4. 4.
21	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	50,203	8.0	31.7	0.5	4.1
22	225		49,160	8.0	32.5	0.2	2.0
23	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	48,264	8.0	33.3	0.2	1.8
24	467	Other Factors Influencing Health Status	43,726	0.7	34.0	0.3	2.8
25	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	41,168	0.7	34.6	0.3	2.9
79	082	Respiratory Neoplasms	41,050	0.7	35.3	1.0	10.1
27	203	Malignancy Of Hepatobiliary System Or Pancreas	40,758	9.0	35.9	6.0	9.3
28	211	Hip & Femur Procedures Except Major Joint Age >17 W/O Cc	39,487	9.0	36.5	6.0	10.2
59	395	Red Blood Cell Disorders Age >17	38,507	9.0	37.2	0.7	8.4
30	524	Transient Ischemia	38,326	9.0	37.8	9.0	8.9
31	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	35,928	9.0	38.3	0.4	5.2
32	880	ó	35,849	9.0	38.9	0.7	8.5
33	158	Anal & Stomal Procedures W/O Cc	34,893	9.0	39.5	0.2	2.2

(Continued) Table S/23 – Total number of public and private healthcare facilities: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Impatient admissions for acute cases. Year 2016

cases.	cuses. 1ea/ 2010	0.1					
			Di	Discharges		-w Iw-	Average
Rank		DRG	Number	%	% cumul.	hospital days	length of stay
34	290	Thyroid Procedures	34,263	0.5	40.0	0.3	3.2
35	381	Abortion W D&C, Aspiration Curettage Or Hysterotomy	34,214	0.5	40.6	0.1	1.7
36	149	Major Small & Large Bowel Procedures W/O Cc	33,816	0.5	41.1	8.0	6.6
37	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	33,287	0.5	41.6	0.2	2.1
38	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	32,919	0.5	42.1	0.3	3.5
39	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	32,553	0.5	42.7	0.3	3.8
40	337	Transurethral Prostatectomy W/O Cc	32,119	0.5	43.2	0.3	4.3
4	124	Circulatory Disorders Except Ami, W Card Cath & Complex Diag	32,013	0.5	43.7	0.5	6.9
45	200	Back & Neck Procedures Except Spinal Fusion W/O Cc	31,207	0.5	44.2	0.3	4.1
43	012	Degenerative Nervous System Disorders	30,969	0.5	44.7	9.0	8.3
4	210	Hip & Femur Procedures Except Major Joint Age >17 W Cc	30,960	0.5	45.2	6.0	13.2
45	060	Simple Pneumonia & Pleurisy Age >17 W/O Cc	30,547	0.5	45.6	9.0	9.8
46	379	Threatened Abortion	30,189	0.5	46.1	0.3	4.7
47	208	Disorders Of The Biliary Tract W/O Cc	29,541	0.5	46.6	0.5	6.7
48	260	Subtotal Mastectomy For Malignancy W/O Cc	29,114	0.5	47.1	0.2	2.3
49	184	Esophagitis, Gastroent & Misc Digest Disorders Age < 18	28,247	6.4	47.5	0.2	3.3
20	202	Cirrhosis & Alcoholic Hepatitis	28,053	9.4	48.0	0.7	10.1
51	860	Bronchitis & Asthma Age 0-17	27,306	6.4	48.4	0.3	4.3
52	389	Full Term Neonate W Major Problems	26,059	9.4	48.8	0.4	6.9
23	174	G.I. Hemorrhage W Cc	25,938	9.4	49.2	0.5	9.1
54	479	Other Vascular Procedures W/O Cc	25,628	6.4	49.6	0.3	8.4
55	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	25,125	6.4	50.0	0.2	2.6
99	204	Disorders of Pancreas Except Malignancy	25,078	4.0	50.4	0.5	9.2
57	227	Soft Tissue Procedures W/O Cc	24,939	9.4	50.8	0.2	2.6
28	243	Medical Back Problems	24,720	6.4	51.2	4.0	6.3
29	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	24,496	6.4	51.6	0.1	2.0
9	143	Chest pain	24,479	6.4	52.0	0.2	3.4
	Tota	Total (top 60 DRGs)	3,269,421	52.0		47.6	
	Grai	Grand Total	6,288,571	100.0		100.0	6.9
Source	data fr	Source: data from the Ministry of Health – SDO 2016					

Source: data from the Ministry of Health - SDO 2016

Table S/24 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases.

			Dı	Discharges	Si	-wI%	Average	In Locusital
Rank		DRG	Number	%	%	hospital	length	in-nospiiai dans
					cumul.	days	of stay	cánn
1	544	Major Joint Replacement or Reattachment of Lower Extremity	896'12	8.4	8.4	8.2	6.4	370,689
2	503	Knee Procedures W/O Pdx Of Infection	21,642	3.2	11.6	6.0	1.9	41,517
3	039	Lens Procedures With Or Without Vitrectomy	19,081	2.8	14.4	2.0	4.8	92,034
4	225	Foot Procedures	18,551	2.7	17.1	9.0	1.5	27,010
5	371	Cesarean Section W/O Cc	14,996	2.2	19.3	1.3	4.1	61,154
9	127	Heart Failure & Shock	13,382	1.9	21.2	2.7	9.1	121,288
7	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	12,871	1.9	23.1	8.0	3.0	38,529
8	373	Vaginal Delivery W/O Complicating Diagnoses	12,796	1.9	24.9	1.0	3.5	44,510
6	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	11,648	1.7	56.6	0.7	2.5	29,632
10	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	10,403	1.5	28.2	9.0	2.7	28,517
11	288	O.R. Procedures For Obesity	9,551	1.4	29.5	8.0	3.8	35,857
12	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	8,878	1.3	30.8	0.4	1.9	16,538
13	430	Psychoses	8,759	1.3	32.1	5.6	29.3	256,393
14	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	8,750	1.3	33.4	0.5	2.6	22,513
15	311	Transurethral Procedures W/O Cc	8,064	1.2	34.6	0.5	2.8	22,971
16	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	7,718	1:1	35.7	0.3	1.5	11,813
17	498	Spinal Fusion Except Cervical W/O Cc	7,428	1:1	36.8	0.7	4. 4.	32,890
18	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	7,325	-:	37.8	12.7	9.87	575,906
19	158	Anal & Stomal Procedures W/O Cc	7,008	1.0	38.9	0.3	2.1	14,713
20	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	6,707	1.0	39.8	0.5	3.3	21,949
21	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	965'9	1.0	40.8	0.4	2.7	17,656
22	087	Pulmonary Edema & Respiratory Failure	6,354	6.0	41.7	1.4	10.1	63,876
23	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	6,191	6.0	42.6	9.0	8.4	29,519
24	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	5,926	6.0	43.5	0.4	3.2	18,745
25	337	Transurethral Prostatectomy W/O Cc	5,705	8.0	44.3	0.5	3.9	21,988
26	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	5,427	8.0	45.1	9.0	4.7	25,726
27	479	Other Vascular Procedures W/O Cc	5,097	0.7	45.8	0.4	3.3	16,652
28	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	4,903	0.7	46.6	0.3	3.2	15,490
59	467	Other Factors Influencing Health Status	4,763	0.7	47.2	1.0	6.6	46,969
30	227	Soft Tissue Procedures W/O Cc	4,695	0.7	47.9	0.2	1.7	8,121

(Continued) Table S/24 - AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) - Inpatient admissions for acute cases. Year 2017

acute cases. Year	es. rear	2017		,				Î
			Di	Discharges	S	% In-	Average	In-hoenital
Rank		DRG	Number	%	%	hospital	length	dans
					cumul.	days	of stay	adys
31	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	4,691	0.7	48.6	0.2	2.1	9,794
32	104	Cardiac Valve & Oth Major Cardiothoracic Proc W Card Cath	4,636	0.7	49.3	1.3	12.6	58,407
33	243	Medical Back Problems	4,479	0.7	49.9	0.5	5.6	24,917
34	232	Arthroscopy	4,460	9.0	50.6	0.1	1.2	5,297
35	012	Degenerative Nervous System Disorders	4,346	9.0	51.2	6.0	8.6	42,802
36	680	Simple Pneumonia & Pleurisy Age >17 W Cc	4,231	9.0	51.8	1.0	11.3	47,614
37	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	4,047	9.0	52.4	0.4	4.4	17,617
38	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	3,697	0.5	53.0	0.2	2.0	7,475
39	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	3,639	0.5	53.5	0.1	1.4	5,107
40	316		3,608	0.5	54.0	9.0	8.0	29,021
4	545	Revision Of Hip Or Knee Replacement	3,583	0.5	54.5	0.7	8.4	30,159
42	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	3,553	0.5	55.1	0.1	1.3	4,545
43	880	Chronic Obstructive Pulmonary Disease	3,508	0.5	55.6	0.7	8.5	29,725
4	160	Hernia Procedures Except Inguinal & Femoral Age >17 W/O Cc	3,391	0.5	56.1	0.2	2.7	9,023
45	014	Intracranial Hemorrhage Or Cerebral Infarction	3,371	0.5	9.99	0.7	9.4	31,699
46	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	3,275	0.5	57.0	0.3	4.0	13,036
47	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	3,266	0.5	57.5	0.3	4.5	14,815
84	143	Chest pain	2,868	4.0	57.9	0.1	2.2	6,399
49	149	Major Small & Large Bowel Procedures W/O Cc	2,757	4.0	58.3	0.5	8.7	23,881
50	119	Vein Ligation & Stripping	2,720	4.0	58.7	0.1	1.3	3,596
51	339	Testes Procedures, Non-Malignancy Age >17	2,715	9.4	59.1	0.1	2.0	5,489
52	428	Disorders Of Personality & Impulse Control	2,687	4.0	59.5	1.7	28.3	76,173
53	189	Other Digestive System Diagnoses Age >17 W/O Cc	2,668	9.4	59.9	0.3	4.7	12,631
54	120	Other Circulatory System O.R. Procedures	2,655	4.0	60.3	0.3	4.9	12,970
55	290	Thyroid Procedures	2,623	4.0	60.7	0.2	2.9	7,584
99	395	Red Blood Cell Disorders Age >17	2,620	9.4	61.1	0.5	9.1	23,734
57	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	2,607	9.4	61.4	0.4	7.4	19,379
28	060	Simple Pneumonia & Pleurisy Age >17 W/O Cc	2,606	4.0	61.8	0.5	8.9	23,220
59	017	Nonspecific Cerebrovascular Disorders W/O Cc	2,576	4.0	62.2	0.7	13.0	33,510
09	053	Sinus & Mastoid Procedures Age >17	2,550	4.0	62.6	0.1	1.8	4,653
	Total	(top 60 DRGs)	429,616	9.79			6.4	2,765,437
	Gran	Grand Total	686,775				9.9	4,545,117

Source: processing by Ermeneia - data from AIOP

Table S/25 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admission for acute cases in the North of Italy. Year 2017

			Q D	Discharges	S	-uI %	Average	L. L
Rank		DRG	Number	%	%	hospital	length	in-nospiiai dens
					cumul.	days	of stay	adis
1	544	Major Joint Replacement or Reattachment of Lower Extremity	36,441	10.7	10.7	11.2	6.3	230,247
2	225	Foot Procedures	11,141	3.3	13.9	0.7	1.2	13,570
3	503	Knee Procedures W/O Pdx Of Infection	11,041	3.2	17.2	8.0	1.5	16,557
4	288	O.R. Procedures For Obesity	7,092	2.1	19.3	1.2	3.5	24,584
5	127	Heart Failure & Shock	6,649	1.9	21.2	3.2	6.6	65,663
9	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	6,078	1.8	23.0	0.5	1.6	9,983
7	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	5,363	1.6	24.6	9.0	2.3	12,550
∞	311	Transurethral Procedures W/O Cc	4,989	1.5	26.0	9.0	2.5	12,240
6	430	Psychoses	4,842	1.4	27.4	4.2	17.9	86,550
10	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	4,421	1.3	28.7	9.0	2.6	11,644
=	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	4,245	1.2	30.0	0.5	2.4	10,280
12	373	Vaginal Delivery W/O Complicating Diagnoses	4,229	1.2	31.2	0.7	3.3	14,104
13	232	Arthroscopy	3,990	1.2	32.4	0.2	1.1	4,427
4	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	3,813	1:1	33.5	0.5	2.6	10,050
15	498	Spinal Fusion Except Cervical W/O Cc	3,751	1.1	34.6	8.0	4.7	17,457
16	158	Anal & Stomal Procedures W/O Cc	3,605	1:1	35.7	0.2	1.4	4,966
17	337	Transurethral Prostatectomy W/O Cc	3,374	1.0	36.6	9.0	3.4	11,349
18	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	3,287	1.0	37.6	9.0	2.8	9,147
19	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	3,120	6.0	38.5	0.2	1.4	4,264
20	243	Medical Back Problems	3,117	6.0	39.4	6.0	6.2	19,202
21	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	3,055	6.0	40.3	0.7	8.4	14,608
22	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	3,013	6.0	41.2	0.5	3.2	9,497
23	479	Other Vascular Procedures W/O Cc	3,008	6.0	42.1	0.5	3.3	9,824
24	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	2,974	6.0	43.0	0.5	3.5	10,497
25	104	Cardiac Valve & Oth Major Cardiothoracic Proc W Card Cath	2,940	6.0	43.8	1.7	12.1	35,720
26	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	2,872	8.0	44.7	0.2	1.2	3,475
27	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	2,860	8.0	45.5	0.3	1.9	5,489
28	087	Pulmonary Edema & Respiratory Failure	2,766	8.0	46.3	1.7	12.4	34,322
29	227	Soft Tissue Procedures W/O Cc	2,762	8.0	47.1	0.2	1.6	4,409

(Continued) Table S/25 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admission for acute cases in the North of Italy: Year 2017

		٠	T	Discharges	es	-W In-	Average	
Rank		DRG	Number	%	%	hospital	length	ın-nospıtal
					cumul.	days	of stay	aays
30	680	Simple Pneumonia & Pleurisy Age >17 W Cc	2,508	0.7	47.9	1.4	11.6	29,131
31	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	2,456	0.7	48.6	0.5	3.9	9,597
32	545	Revision Of Hip Or Knee Replacement	2,320	0.7	49.3	6.0	8.3	19,266
33	014	Intracranial Hemorrhage Or Cerebral Infarction	2,206	9.0	49.9	1.0	9.4	20,772
34	428	Disorders Of Personality & Impulse Control	2,125	9.0	50.5	2.8	26.9	57,060
35	467	Other Factors Influencing Health Status	2,116	9.0	51.1	0.4	3.8	8,007
36	012	Degenerative Nervous System Disorders	2,073	9.0	51.8	6.0	8.7	17,983
37	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	2,024	9.0	52.3	0.1	1.1	2,276
38	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	1,966	9.0	52.9	0.2	1.6	3,228
39	880	Chronic Obstructive Pulmonary Disease	1,903	9.0	53.5	8.0	9.0	17,070
40	245	Bone Diseases & Specific Arthropathies W/O Cc	1,845	0.5	54.0	0.7	7.8	14,357
41	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	1,837	0.5	54.6	0.4	4.6	8,493
42	365	Other Female Reproductive System O.R. Procedures	1,815	0.5	55.1	0.0	0.4	674
43	335	Major Male Pelvic Procedures W/O Cc	1,773	0.5	55.6	9.0	8.9	12,030
4	371	Cesarean Section W/O Cc	1,734	0.5	56.1	0.4	4.6	8,044
45	053	Sinus & Mastoid Procedures Age >17	1,728	0.5	9.99	0.1	1.7	2,854
46	461	O.R. Proc W Diagnoses of Other Contact W Health Services	1,717	0.5	57.1	0.2	3.0	5,121
47	800	Periph & Cranial Nerve & Other Nerv Syst Proc W/O Cc	1,717	0.5	57.6	0.1	1.7	2,900
48	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	1,709	0.5	58.1	0.3	3.9	6,730
49	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	1,702	0.5	58.6	0.5	5.8	9,838
50	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	1,650	0.5	59.1	0.1	1.3	2,171
51	060	Simple Pneumonia & Pleurisy Age >17 W/O Cc	1,636	0.5	59.6	0.7	0.6	14,744
52	160	Hernia Procedures Except Inguinal & Femoral Age >17 W/O Cc	1,554	0.5	0.09	0.2	2.3	3,520
53	149	Major Small & Large Bowel Procedures W/O Cc	1,543	0.5	60.5	9.0	7.8	12,038
54	045	Intraocular Procedures Except Retina, Iris & Lens	1,534	4.0	61.0	0.2	2.1	3,214
55	395	Red Blood Cell Disorders Age >17	1,502	9.4	61.4	9.0	8.7	13,025
99	523	Alc/Drug Abuse Or Depend W/O Rehabilitation Therapy W/O Cc	1,477	0.4	61.8	0.7	10.3	15,265
57	131	Peripheral Vascular Disorders W/O Cc	1,471	6.0	62.3	0.5	6.3	9,256
58	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	1,452	6.0	62.7	0.5	7.4	10,735
65	532	Spinal Procedures W/O Cc	1,426	6.0	63.1	0.2	2.4	3,379
09	133	Atherosclerosis W/O Cc	1,379	9.4	63.5	6.4	5.4	7,477
	Total	(top 60 DRGs)	216,736	63.5			4.9	1,066,930
	Grand	d Total (North)	341,310				0.9	2,055,540
Source: p	rocessi	Source: processing by Ermeneia – data from A10P						

ource: processing by Ermeneia – data from AIOP

Table S26 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the Center of Italy. Year 2017

			Di	Discharges		-W In-	Average	L. L
Rank		DRG	Number	%	%	hospital	length	ın-nospuai dang
					cumul.	days	of stay	aays
1	544	Major Joint Replacement or Reattachment of Lower Extremity	10,955	17.0	17.0	20.3	6.4	69,730
7	225	Foot Procedures	4,886	7.6	24.6	2.5	1.7	8,492
3	503	Knee Procedures W/O Pdx OfInfection	3,610	5.6	30.2	1.3	1.3	4,560
4	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	2,916	4.5	34.7	1.3	1.6	4,534
5	498	Spinal Fusion Except Cervical W/O Cc	1,687	5.6	37.3	1.8	3.6	6,036
9	127	Heart Failure & Shock	1,593	2.5	39.8	4.8	10.4	16,525
7	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	1,554	2.4	42.2	1.1	2.4	3,701
∞	680	Simple Pneumonia & Pleurisy Age >17 W Cc	166	1.5	43.7	3.2	11.0	10,869
6	087	Pulmonary Edema & Respiratory Failure	952	1.5	45.2	2.7	9.6	9,152
10	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	903	1.4	46.6	0.7	2.7	2,429
=	337	Transurethral Prostatectomy W/O Cc	998	1.3	47.9	6.0	3.7	3,175
12	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	836	1.3	49.2	1.0	4.0	3,314
13	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	800	1.2	50.5	9.0	2.5	1,968
14	288	O.R. Procedures For Obesity	799	1.2	51.7	1.0	4.3	3,400
15	545	Revision Of Hip Or Knee Replacement	793	1.2	53.0	2.0	8.7	888'9
16	311	Transurethral Procedures W/O Cc	757	1.2	54.1	0.7	3.2	2,397
17	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	717	1:1	55.2	0.7	3.4	2,406
18	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	713	1:1	56.3	1:1	5.3	3,767
19	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	617	1.0	57.3	0.2	1.2	731
20	227	Soft Tissue Procedures W/O Cc	613	1.0	58.3	4.0	2.0	1,256
21	247	Signs & Symptoms Of Musculoskeletal System & Conn Tissue	609	6.0	59.2	0.7	4.0	2,435
22	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	009	6.0	60.1	0.4	2.1	1,286
23	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	517	8.0	6.09	4.0	2.7	1,385
24	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	490	8.0	61.7	0.7	5.2	2,550
25	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	451	0.7	62.4	0.7	5.3	2,398
56	880	Chronic Obstructive Pulmonary Disease	442	0.7	63.1	1.2	0.6	3,968
27	524	Transient Ischemia	441	0.7	63.8	1.1	8.4	3,709
28	316	Renal failure	420	0.7	4.4	1.2	9.6	4,043
56	211	Hip & Femur Procedures Except Major Joint Age >17 W/O Cc	401	9.0	65.0	8.0	6.5	2,601
30	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	395	9.0	9:59	0.1	1.3	496

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(Continued) Table \$256 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the Center of Italy: Year 2017

			Di	Discharges		-w Im-	Average	In Locuster
Rank		DRG	Number	%	%	hospital	length	ın-nospuai dens
					cumul.	days	of stay	aays
31	158	Anal & Stomal Procedures W/O Cc	376	9.0	66.2	0.3	2.7	1,008
32	290	Thyroid Procedures	354	0.5	8.99	0.3	2.9	1,038
33	800	Periph & Cranial Nerve & Other Nerv Syst Proc W/O Cc	344	0.5	67.3	0.1	1.2	428
34	060	Simple Pneumonia & Pleurisy Age >17 W/O Cc	342	0.5	8.79	1.0	9.7	3,332
35	053	Sinus & Mastoid Procedures Age >17	335	0.5	68.4	0.2	1.9	646
36	467	Other Factors Influencing Health Status	333	0.5	6.89	0.1	1.5	498
37	395	Red Blood Cell Disorders Age >17	332	0.5	69.4	1.0	10.3	3,433
38	296	Nutritional & Misc Metabolic Disorders Age >17 W Cc	329	0.5	6.69	8.0	8.1	2,659
39	014	Intracranial Hemorrhage Or Cerebral Infarction	323	0.5	70.4	1.0	11.0	3,564
40	119	Vein Ligation & Stripping	309	0.5	70.9	0.1	1.1	342
41	149	Major Small & Large Bowel Procedures W/O Cc	300	0.5	71.4	0.7	8.1	2,433
42	320	Kidney & Urinary Tract Infections Age >17 W Cc	299	0.5	71.8	8.0	8.8	2,639
43	082	Respiratory Neoplasms	285	9.4	72.3	9.0	6.7	1,920
4	189	Other Digestive System Diagnoses Age >17 W/O Cc	267	0.4	72.7	0.3	3.2	863
45	160	Hernia Procedures Except Inguinal & Femoral Age >17 W/O Cc	264	9.4	73.1	0.2	2.5	654
46	217	Wound debridement and skin graft, exc. hand, for musculoskeletal and connective tissue disease	264	9.4	73.5	0.4	4.6	1,220
47	208	Disorders Of The Biliary Tract W/O Cc	255	9.4	73.9	0.5	6.3	1,607
48	522	Alc/Drug Abuse Or Depend W Rehabilitation Therapy W/O Cc	255	9.4	74.3	1.0	13.3	3,385
49	564	Headaches Age >17	243	9.4	74.7	0.3	4.9	1,190
50	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	241	9.4	75.0	0.2	3.1	738
51	210	Hip & Femur Procedures Except Major Joint Age >17 W Cc	240	9.4	75.4	1.0	13.9	3,342
52	532	Spinal Procedures W/O Cc	239	9.4	75.8	0.2	2.6	622
53	313	Urethral Procedures, Age >17 W/O Cc	228	9.4	76.1	0.1	2.2	492
54	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	228	9.4	76.5	0.1	1.6	357
55	430	Psychoses	223	0.3	2.97	1.3	19.4	4,330
99	305	Kidney And Ureter Procedures For Non-Neoplasm Without Cc	220	0.3	77.2	0.2	3.5	9//
57	232	Arthroscopy	216	0.3	77.5	0.1	1.4	303
58	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	211	0.3	77.8	0.4	6.2	1,304
59	335	Major Male Pelvic Procedures W/O Cc	210	0.3	78.2	0.5	7.5	1,583
09	309	Minor Bladder Procedures W/O Cc	200	0.3	78.5	0.2	3.0	290
	Tota	Total (top 60 DRGs)	50,589	78.5			4.7	237,497
	Gran	Grand Total (Center)	64,470				5.3	343,797
Source:	Sadonic	Source: processing by Fringing – data from 410P						

Source: processing by Ermeneia - data from AIOP

Table S/27 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the South of Italy. Year 2017

			Di	Discharges		-uI %	Average	L. L
Rank		DRG	Number	%	%	hospital	length	ın-nospuai dans
					cumul.	day	of stay	adys
1	039	Lens Procedures With Or Without Vitrectomy	18,879	6.7	6.7	4.3	4.9	91,778
2	371	Cesarean Section W/O Cc	13,262	4.7	11.4	2.5	4.0	53,110
з	544	Major Joint Replacement or Reattachment of Lower Extremity	10,572	3.8	15.2	3.3	6.7	70,712
4	373	Vaginal Delivery W/O Complicating Diagnoses	8,566	3.0	18.2	1.4	3.5	30,403
5	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	7,819	2.8	21.0	6.0	2.5	19,443
9	503	Knee Procedures W/O Pdx Of Infection	6,991	2.5	23.5	1.0	2.9	20,400
7	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	6,791	2.4	25.9	1.1	3.5	23,573
∞	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	6,043	2.2	28.1	26.6	94.3	570,071
6	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	5,483	2.0	30.0	6.0	3.4	18,542
10	464	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	5,255	1.9	31.9	0.7	3.0	15,808
11	127	Heart Failure & Shock	5,140	1.8	33.7	1.8	7.6	39,100
12	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	3,999	4:1	35.2	8.0	4.3	17,131
13	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	3,725	1.3	36.5	0.5	3.1	11,368
14	430	Psychoses	3,694	1.3	37.8	7.7	8.4	165,513
15	158	Anal & Stomal Procedures W/O Cc	3,027	1:1	38.9	0.4	2.9	8,739
16	087	Pulmonary Edema & Respiratory Failure	2,636	6.0	39.8	1.0	7.7	20,402
17	225	Foot Procedures	2,524	6.0	40.7	0.2	2.0	4,948
18	311	Transurethral Procedures W/O Cc	2,318	8.0	41.5	0.4	3.6	8,334
19	467	Other Factors Influencing Health Status	2,314	8.0	42.4	1.8	16.6	38,464
20	143	Chest pain	2,299	8.0	43.2	0.2	1.9	4,340
21	012	Degenerative Nervous System Disorders	2,222	8.0	44.0	1.1	10.9	24,283
22	900	Carpal Tunnel Release	2,174	8.0	44.7	0.1	1.5	3,169
23	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	2,147	8.0	45.5	0.3	2.7	5,887
24	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	2,122	8.0	46.3	0.4	3.9	8,213
25	479	Other Vascular Procedures W/O Cc	2,069	0.7	47.0	0.3	3.3	6,749
26	017	Nonspecific Cerebrovascular Disorders W/O Cc	2,031	0.7	47.7	1.4	14.5	29,517
27	498	Spinal Fusion Except Cervical W/O Cc	1,990	0.7	48.4	0.4	4.7	9,397
28	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	1,921	0.7	49.1	0.4	4.5	8,720
29	316	Renal failure	1,907	0.7	49.8	9.0	6.3	11,980

(Continued) Table S/27 – AIOP Private hospitals (accredited healthcare facilities): top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the South of Italy, Year 2017

			D	Discharges		-uI %	Average	1. 1
Rank		DRG	Number	%	%	hospital	length	In-nospital
					cumul.	days	of stay	aays
30	119	Vein Ligation & Stripping	1,818	9.0	50.4	0.1	1.5	2,646
31	270	Other Skin, Subcut Tiss & Breast Proc W/O Cc	1,718	9.0	51.1	0.2	2.2	3,863
32	104	Cardiac Valve & Oth Major Cardiothoracic Proc W Card Cath	1,696	9.0	51.7	1.1	13.4	22,687
33	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	1,682	9.0	52.3	0.1	1.8	3,015
34	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	1,679	9.0	52.9	0.2	2.8	4,689
35	189	Other Digestive System Diagnoses Age >17 W/O Cc	1,668	9.0	53.4	0.4	5.5	9,141
36	288	O.R. Procedures For Obesity	1,660	9.0	54.0	0.4	4.7	7,873
37	016	Nonspecific Cerebrovascular Disorders W Cc	1,654	9.0	54.6	0.7	9.3	15,394
38	281	Trauma to the Skin, Subcut Tiss & Breast Age >17 W/O Cc	1,642	9.0	55.2	0.0	0.1	113
39	339	Testes Procedures, Non-Malignancy Age >17	1,592	9.0	55.8	0.2	2.4	3,832
40	160	Hernia Procedures Except Inguinal & Femoral Age >17 W/O Cc	1,573	9.0	56.3	0.2	3.1	4,849
4	381	Abortion W D&C, Aspiration Curettage Or Hysterotomy	1,524	0.5	56.9	0.1	1.2	1,841
42	337	Transurethral Prostatectomy W/O Cc	1,465	0.5	57.4	0.3	5.1	7,464
43	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	1,452	0.5	57.9	0.3	3.7	5,436
4	364	D&C, Conization Except For Malignancy	1,447	0.5	58.4	0.1	1.1	1,642
45	315	Other kidney & urinary tract O.R. procedures	1,442	0.5	58.9	0.2	2.9	4,124
46	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	1,372	0.5	59.4	0.1	1.6	2,205
47	120	Other Circulatory System O.R. Procedures	1,342	0.5	59.9	0.2	3.8	5,121
48	323	Urinary Stones W Cc, &/Or Esw Lithotripsy	1,337	0.5	60.4	1.4	22.7	30,299
49	227	Soft Tissue Procedures W/O Cc	1,320	0.5	6.09	0.1	1.9	2,456
20	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	1,301	0.5	61.3	0.1	1.5	1,912
51	379	Threatened Abortion	1,296	0.5	61.8	0.3	4.3	5,537
52	290	Thyroid Procedures	1,264	4.0	62.2	0.2	3.1	3,945
53	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	1,246	4.0	62.7	0.1	2.3	2,854
54	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	1,231	9.4	63.1	0.1	2.5	3,019
55	243	Medical Back Problems	1,175	9.4	63.5	0.2	3.8	4,470
99	880	Chronic Obstructive Pulmonary Disease	1,163	4.0	63.9	0.4	7.5	8,687
57	342	Circumcision Age >17	1,144	4.0	64.4	0.2	2.8	3,225
28	524	Transient Ischemia	1,092	9.4	64.7	0.3	6.5	7,096
65	145	Other Circulatory System Diagnoses W/O Cc	1,073	4.0	65.1	0.2	4.3	4,655
09	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	1,065	4.0	65.5	0.4	7.2	7,717
	Total	(top 60 DRGs)	184,053	65.5			8.3	1,531,901
	Grand	d Total (South)	280,995				7.6	2,145,780
Source: L	wocessi	Source: processing by Ermeneia – data from AIOP						

Source: processing by Ermeneia - data from AIOP

Table 8/28 – Total number of public and private healthcare facilities: top 30 DRGs according to the number of discharges (DRG Version 24.0) – Day hospital admissions for acute cases.

			D	Discharges			Average
Rank		DRG	Number	%	% cumul.	% Accesses	number of
							accesses
_	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	125,493	6.4	6.4	24.7	10.5
2	381	Abortion W D&C, Aspiration Curettage Or Hysterotomy	89,402	4.6	11.0	2.2	1.3
ю	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	86,516	4.4	15.4	2.1	1.3
4	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	68,390	3.5	18.9	1.9	1.5
5	266	Skin Graft &/Or Debrid Except For Skin Ulcer Or Cellulitis W/O Cc	52,193	2.7	21.6	1.5	1.6
9	467	Other Factors Influencing Health Status	48,663	2.5	24.1	1.9	2.0
7	503	Knee Procedures W/O Pdx Of Infection	42,159	2.2	26.3	1.1	1.4
∞	039	Lens Procedures With Or Without Vitrectomy	40,229	2.1	28.3	1.5	2.0
6	364	D&C, Conization Except For Malignancy	38,078	2.0	30.3	1.0	1.4
10	225	Foot Procedures	32,585	1.7	32.0	6.0	1.5
11	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	32,150	1.6	33.6	8.0	1.4
12	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	30,673	1.6	35.2	8.0	1.4
13	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	30,237	1.5	36.7	6.0	1.5
14	042	Intraocular Procedures Except Retina, Iris & Lens	28,853	1.5	38.2	6.0	1.7
15	270	Other Skin, Subcut Tiss & Breast Proc W/O Cc	28,312	1.5	39.7	8.0	1.5
16	119	Vein Ligation & Stripping	28,186	1.4	41.1	8.0	1.5
17	169	Mouth Procedures W/O Cc	24,173	1.2	42.3	0.7	1.5
18	158	Anal & Stomal Procedures W/O Cc	23,490	1.2	43.5	0.7	1.6
19	395	Red Blood Cell Disorders Age >17	19,446	1.0	44.5	3.1	9.8
20	301	Endocrine Disorders W/O Cc	19,408	1.0	45.5	0.7	2.0
21	466	Aftercare W/O History Of Malignancy As Secondary Diagnosis	19,030	1.0	46.5	6.0	2.5
22	036	Retinal procedures	18,728	1.0	47.5	0.7	1.9
23	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	18,343	6.0	48.4	0.5	1.5
24	339	Testes Procedures, Non-Malignancy Age >17	17,532	6.0	49.3	0.5	1.5
25	227	Soft Tissue Procedures W/O Cc	17,487	6.0	50.2	0.5	1.4
26	267	Perianal & Pilonidal Procedures	16,093	8.0	51.0	0.5	1.7
27	404	Lymphoma & Non-Acute Leukemia W/O Cc	15,446	8.0	51.8	1.7	5.9
28	365	Other Female Reproductive System O.R. Procedures	15,189	8.0	52.6	0.3	1.0
59	040	Extraocular Procedures Except Orbit Age > 17	15,104	8.0	53.4	0.5	1.6
30	189	Other Digestive System Diagnoses Age >17 W/O Cc	14,561	0.7	54.1	0.5	1.7
	Total	Total (top 30 DRGs)	,056,149	54.1		55.4	
	Gran	Grand Total	,951,876	100.0		0.001	2.7
Source.	data fre	Source- data from the Minister of Health - SDO 2016					

Source: data from the Ministry of Health - SDO 2016

Table S/29 — Total number of public and private healthcare facilities: top 30 DRGs according to the number of discharges (DRG Version 24.0) — Inpatient admissions for rehabilitation treatment. Year 2016

100000000000000000000000000000000000000			7	Dischargos		1 Pringed of 10	Anounce
Rank		DRG		ischar Ses	1	iniidsou-uro/	Janes de
			Number	%	% cumul.	aays	tength of stay
_	256	Other Musculoskeletal System & Connective Tissue Diagnoses	76,429	24.0	24.0	16.6	17.9
7	012	Degenerative Nervous System Disorders	35,971	11.3	35.2	17.7	40.6
e	249	Aftercare, Musculoskeletal System & Connective Tissue	25,535	8.0	43.2	8.0	25.9
4	145	Other Circulatory System Diagnoses W/O Cc	17,340	5.4	48.7	3.5	16.8
S	4	Other Circulatory System Diagnoses W Cc	14,416	4.5	53.2	3.3	19.1
9	462	Rehabilitation	12,768	4.0	57.2	3.5	22.4
7	245	Bone Diseases & Specific Arthropathies W/O Cc	10,977	3.4	9.09	2.2	16.8
∞	600	Spinal Disorders & Injuries	9,790	3.1	63.7	6.1	51.1
6	087	Pulmonary Edema & Respiratory Failure	8,587	2.7	66.4	2.4	23.4
10	247	Signs & Symptoms Of Musculoskeletal System & Conn Tissue	7,767	2.4	8.89	2.3	23.9
11	430	Psychoses	7,719	2.4	71.2	2.6	28.1
12	236	Fractures Of Hip & Pelvis	7,499	2.3	73.6	2.8	30.5
13	127	Heart Failure & Shock	7,085	2.2	75.8	1.7	19.6
14	035	Other Disorders Of Nervous System W/O Cc	6,359	2.0	77.8	2.7	35.6
15	880	Chronic Obstructive Pulmonary Disease	5,348	1.7	79.5	1.5	22.6
16	014	Intracranial Hemorrhage Or Cerebral Infarction	4,659	1.5	80.9	2.5	44.2
17	034	Other Disorders Of Nervous System W Cc	4,590	1.4	82.4	2.2	38.7
18	248	Tendonitis, Myositis & Bursitis	3,788	1.2	83.6	1.2	27.0
19	243	Medical Back Problems	3,141	1.0	84.5	1.0	25.2
20	544	Major Joint Replacement or Reattachment of Lower Extremity	2,898	6.0	85.4	9.0	17.9
21	467	Other Factors Influencing Health Status	2,757	6.0	86.3	0.7	21.7
22	428	Disorders Of Personality & Impulse Control	2,508	8.0	87.1	1.0	34.4
23	013	Multiple Sclerosis & Cerebellar Ataxia	2,101	0.7	87.8	8.0	32.8
24	023	Nontraumatic Stupor & Coma	1,785	9.0	88.3	2.0	92.8
25	133	Atherosclerosis W/O Cc	1,766	9.0	88.9	0.4	17.2
56	522	Alc/Drug Abuse Or Depend W Rehabilitation Therapy W/O Cc	1,766	9.0	89.4	9.0	26.2
27	244	Bone Diseases & Specific Arthropathies W Cc	1,684	0.5	6.68	0.4	20.5
28	019	Cranial & Peripheral Nerve Disorders W/O Cc	1,402	9.4	90.4	0.5	30.1
59	429	Organic Disturbances & Mental Retardation	1,345	9.4	8.06	0.4	22.2
30	073	Other Ear, Nose, Mouth & Throat Diagnoses Age >17	1,275	9.4	91.2	0.2	13.7
	Total	(top 30 DRGs)	291,055	91.2		91.5	
	Gran	Grand Total	319,113	100.0		100.0	25.8
Source:	data fro	Source: data from the Ministry of Health – SDO 2016					

Table S/30 – AIOP Private hospitals (accredited healthcare facilities): top 30 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for rehabilitation treatment. Year 2017

			D	Discharges		-wI %	Average	T T
Rank		DRG	Number	%	% cumul.	hospital davs	length of stav	in-nospiiai days
-	256	Other Musculoskeletal System & Connective Tissue Diagnoses	35.156	34.3	34.3	24.0	16.8	591.474
7	249	Aftercare, Musculoskeletal System & Connective Tissue	9,040	8.8	43.1	9.6	26.1	235,556
ι κ	012	Degenerative Nervous System Disorders	8,650	8.4	51.5	14.1	40.0	346,354
4	145	Other Circulatory System Diagnoses W/O Cc	808'9	9.9	58.1	4.7	17.2	116,856
5	430	Psychoses	4,422	4.3	62.4	5.2	29.0	128,214
9	245	Bone Diseases & Specific Arthropathies W/O Cc	3,934	3.8	66.3	2.7	16.7	65,835
7	462	Rehabilitation	3,728	3.6	6.69	3.2	21.3	79,538
~	247	Signs & Symptoms Of Musculoskeletal System & Conn Tissue	3,207	3.1	73.0	3.5	26.8	86,097
6	4	Other Circulatory System Diagnoses W Cc	3,058	3.0	76.0	2.5	20.2	61,856
10	236		2,288	2.2	78.2	3.0	32.3	73,974
11	035	Other Disorders Of Nervous System W/O Cc	1,725	1.7	79.9	2.4	34.2	58,991
12	880	Chronic Obstructive Pulmonary Disease	1,447	1.4	81.3	1.3	22.4	32,434
13	087	Pulmonary Edema & Respiratory Failure	1,253	1.2	82.5	1.2	23.7	29,660
14	600	Spinal Disc	1,242	1.2	83.8	2.4	47.3	58,798
15	428		1,207	1.2	84.9	1.5	30.1	36,370
16	248	Tendonitis, Myositis & Bursitis	1,110	1:1	86.0	1.2	27.5	30,542
17	127	Heart Failu	1,055	1.0	87.0	6.0	19.9	21,022
18	014	Intracranial Hemorrhage Or Cerebral Infarction	096	6.0	88.0	1.8	47.1	45,213
19	522		948	6.0	6.88	6.0	24.5	23,194
20	034	Other Disorders Of Nervous System W Cc	946	6.0	8.68	1.5	38.6	36,538
21	243		009	9.0	90.4	9.0	25.0	14,978
22	244	Bone Diseases & Specific Arthropathies W Cc	009	9.0	91.0	0.5	20.8	12,452
23	019	Cranial & Peripheral Nerve Disorders W/O Cc	288	9.0	91.6	0.7	29.0	17,026
24	133	Atherosclerosis W/O Cc	541	0.5	92.1	0.4	17.5	9,450
25	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	517	0.5	92.6	0.5	23.2	12,006
56	467	Other Factors Influencing Health Status	492	0.5	93.1	0.4	21.0	10,327
27	523	Alc/Drug Abuse Or Depend W/O Rehabilitation Therapy W/O Cc	485	0.5	93.6	0.5	26.0	12,624
28	013	Multiple Sclerosis & Cerebellar Ataxia	441	0.4	94.0	0.5	30.3	13,378
59	023	Nontraumatic Stupor & Coma	433	9.4	94.4	1.6	91.4	39,565
30	136	Cardiac Congenital & Valvular Disorders Age >17 W/O Cc	430	0.4	94.8	0.3	16.1	6,911
	Tot	Total (top 30 DRGs)	97,311	94.8			23.7	2,307,233
	Gra	Grand Total	102,625				24.0	2,460,973
Source.	nroco	Source: processing hy Frmonoia – data from AIOP						

Source: processing by Ermeneia - data from AIOP

Table S/31 – Total number of public and private facilities: description of activities according to the Major Diagnostic Categories (MDC) – Inpatient admissions for acute cases. Year 2016

MDC	Number of cases	%	In-hospital	Average length
		,	aays	of stay
01 – Diseases and Disorders of the Nervous System	432,980	6.9	3,524,885	8.1
02 – Diseases and Disorders of the Eye	71,046	1:1	206,818	2.9
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	208,407	3.3	664,341	3.2
04 – Diseases and Disorders of the Respiratory System	568,882	0.6	5,425,052	9.5
05 – Diseases and Disorders of the Circulatory System	919,182	14.6	6,511,875	7.1
06 – Diseases and Disorders of the Digestive System	572,032	9.1	4,035,642	7.1
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	297,023	4.7	2,356,010	7.9
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	806,091	12.8	4,939,361	6.1
09 - Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	181,450	2.9	761,948	4.2
10 - Endocrine, Nutritional and Metabolic Diseases and Disorders	160,499	2.6	878,046	5.5
11 – Diseases and Disorders of the Kidney and Urinary Tract	362,242	5.8	2,429,192	6.7
12 – Diseases and Disorders of the Male Reproductive System	108,893	1.7	505,014	4.6
13 – Diseases and Disorders of the Female Reproductive System	183,430	2.9	741,949	4.0
14 – Pregnancy, Childbirth and the Puerperium	594,124	9.4	2,267,977	3.8
15 - Newborns and other Neonates with Conditions Originating in Perinatal Period	116,555	1.9	953,379	8.2
16 - Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	72,086	1.1	575,920	8.0
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	149,287	2.4	1,140,569	7.6
18 - Infectious and Parasitic Diseases, Systemic or Unspecified Sites	133,128	2.1	1,452,667	10.9
19 – Mental Diseases and Disorders	138,880	2.2	1,630,093	11.7
20 - Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	13,120	0.2	805'96	7.4
21 – Injuries, Poisonings and Toxic Effects of Drugs	50,923	8.0	301,662	5.9
22 – Burns	3,872	0.1	51,663	13.3
23 - Factors Influencing Health Status and Other Contacts with Health Services	89,251	1.4	396,371	4.4
24 – Multiple Significant Trauma	8,959	0.1	127,420	14.2
25 – Human Immunodeficiency Virus Infections	6,071	0.1	101,570	16.7
Other DRGs	12,911	0.2	130,041	10.1
Pre MDC	27,247	0.4	962,745	35.3
Grand Total	6,288,571	100.0	43,168,718	6.9
Source: data from the Ministry of Health - SDO 2016				

Source: data from the Ministry of Health – SDO 2016

Table S/32 – Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) – Day hospital admissions for acute cases. Year 2016

				Average
MDC	Number of cases	%	Accesses	number of
				accesses
01 – Diseases and Disorders of the Nervous System	73,057	3.7	172,264	2.4
02 – Diseases and Disorders of the Eve	124,877	6.4	230,815	1.8
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	129,044	9.9	223,692	1.7
04 – Diseases and Disorders of the Respiratory System	33,087	1.7	95,593	2.9
05 – Diseases and Disorders of the Circulatory System	111,594	5.7	227,291	2.0
06 – Diseases and Disorders of the Digestive System	165,293	8.5	290,349	1.8
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	30,525	1.6	114,620	3.8
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	248,788	12.7	489,072	2.0
09 - Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	157,326	8.1	289,781	1.8
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	58,595	3.0	135,888	2.3
11 – Diseases and Disorders of the Kidney and Urinary Tract	77,574	4.0	191,034	2.5
12 – Diseases and Disorders of the Male Reproductive System	74,592	3.8	114,646	1.5
13 – Diseases and Disorders of the Female Reproductive System	171,323	8.8	227,426	1.3
14 – Pregnancy, Childbirth and the Puerperium	108,496	5.6	156,587	1.4
15 - Newborns and other Neonates with Conditions Originating in Perinatal Period	1,954	0.1	4,646	2.4
16 - Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	41,095	2.1	264,071	6.4
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	184,562	9.5	1,638,326	8.9
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	6,748	0.3	24,479	3.6
19 – Mental Diseases and Disorders	38,177	2.0	184,054	4.8
20 - Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	946	0.0	9,001	9.5
21 – Injuries, Poisonings and Toxic Effects of Drugs	9,923	0.5	27,566	2.8
22 – Burns	334	0.0	1,184	3.5
23 - Factors Influencing Health Status and Other Contacts with Health Services	92,580	4.7	194,052	2.1
24 – Multiple Significant Trauma	3	0.0	3	1.0
25 – Human Immunodeficiency Virus Infections	8,532	0.4	36,336	4.3
Other DRGs	2,798	0.1	6,050	2.2
Pre MDC	53	0.0	225	4.2
Grand Total	1,951,876	100.0	5,349,051	2.7
Source: data from the Ministry of Health – SDO 2016				

Table 8/33 – Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) – Inpatient admissions for rehabilitation.

Year 2016

1 eu 2010				
MDC	Number of cases	%	In-hospital davs	Average length of stav
01 – Diseases and Disorders of the Nervous System	73,237	23.0	3,067,991	41.9
02 – Diseases and Disorders of the Eve	96	0.0	942	8.6
03 - Diseases and Disorders of The Ear, Nose, Mouth and Throat	1,327	0.4	17,889	13.5
04 – Diseases and Disorders of the Respiratory System	17,261	5.4	387,005	22.4
05 – Diseases and Disorders of the Circulatory System	47,337	14.8	865,627	18.3
06 – Diseases and Disorders of the Digestive System	237	0.1	4,892	20.6
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	88	0.0	1,619	18.4
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	143,710	45.0	2,990,077	20.8
09 - Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	181	0.1	5,734	31.7
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	1,808	9.0	43,174	23.9
11 – Diseases and Disorders of the Kidney and Urinary Tract	483	0.2	5,954	12.3
12 – Diseases and Disorders of the Male Reproductive System	6	0.0	279	31.0
13 – Diseases and Disorders of the Female Reproductive System	11	0.0	132	12.0
14 – Pregnancy, Childbirth and the Puerperium	0	0.0	0	0.0
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	6	0.0	199	22.1
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	74	0.0	1,888	25.5
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	116	0.0	3,112	26.8
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	158	0.0	4,204	26.6
19 – Mental Diseases and Disorders	13,360	4.2	380,670	28.5
20 - Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	2,810	6.0	69,267	24.7
21 – Injuries, Poisonings and Toxic Effects of Drugs	264	0.1	5,529	20.9
22 - Burns	6	0.0	270	30.0
23 - Factors Influencing Health Status and Other Contacts with Health Services	16,033	5.0	356,090	22.2
24 – Multiple Significant Trauma	170	0.1	7,470	43.9
25 – Human Immunodeficiency Virus Infections	2	0.0	62	39.5
Other DRGs	129	0.0	6,382	49.5
Pre MDC	194	0.1	17,550	90.5
Grand Total	319,113	100.0	8,244,025	25.8
Source: data from the Ministry of Health - SDO 2016				

Source: data from the Ministry of Health - SDO 2016

Table S/34 – Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) – Day hospital admissions for rehabilitation. Year 2016_

MDC	Number of cases	%	Accesses	Average number of
				accesses
01 – Diseases and Disorders of the Nervous System	12,020	37.6	175,667	14.6
02 – Diseases and Disorders of the Eye	24	0.1	160	6.7
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	31	0.1	177	5.7
04 – Diseases and Disorders of the Respiratory System	1,221	3.8	13,246	10.8
05 – Diseases and Disorders of the Circulatory System	3,765	11.8	47,034	12.5
06 – Diseases and Disorders of the Digestive System	61	0.2	400	9.9
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	2	0.0	28	14.0
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	6,348	19.9	120,924	19.0
09 - Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	35	0.1	572	16.3
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	52	0.2	755	14.5
11 – Diseases and Disorders of the Kidney and Urinary Tract	195	9.0	1,786	9.2
12 – Diseases and Disorders of the Male Reproductive System	4	0.0	29	7.3
13 – Diseases and Disorders of the Female Reproductive System	15	0.0	222	14.8
14 – Pregnancy, Childbirth and the Puerperium	0	0.0	0	0.0
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	∞	0.0	38	4.8
16 - Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	2	0.0	12	0.9
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	103	0.3	1,076	10.4
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	2	0.0	27	13.5
19 - Mental Diseases and Disorders	2,058	6.4	22,353	10.9
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	_	0.0	12	12.0
21 – Injuries, Poisonings and Toxic Effects of Drugs	21	0.1	363	17.3
22 – Burns	0	0.0	0	0.0
23 - Factors Influencing Health Status and Other Contacts with Health Services	5,981	18.7	86,657	14.5
24 – Multiple Significant Trauma	2	0.0	41	20.5
25 – Human Immunodeficiency Virus Infections	0	0.0	0	0.0
Other DRGs	4	0.0	84	21.0
Pre MDC	0	0.0	0	0.0
Grand Total	31,955	100.0	471,663	14.8
Source: data from the Ministry of Health – SDO 2016				

Table 8/35 - Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) - Long-stay care admissions. Year 2016

MDC	Number of cases	%	In-hospital days	Average length of stay
01 – Diseases and Disorders of the Nervous System	17,485	16.7	515,979	29.5
02 – Diseases and Disorders of the Eye	32	0.0	1,074	33.6
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	443	0.4	8,153	18.4
04 – Diseases and Disorders of the Respiratory System	14,070	13.4	336,221	23.9
05 – Diseases and Disorders of the Circulatory System	12,153	11.6	309,623	25.5
06 – Diseases and Disorders of the Digestive System	3,885	3.7	102,299	26.3
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	2,641	2.5	66,520	25.2
08 - Diseases and Disorders of the Musculoskeletal System and Connective Tissue	24,975	23.8	716,440	28.7
09 - Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	1,459	1.4	40,070	27.5
10 - Endocrine, Nutritional and Metabolic Diseases and Disorders	2,009	1.9	48,918	24.3
11 – Diseases and Disorders of the Kidney and Urinary Tract	3,480	3.3	84,743	24.4
12 – Diseases and Disorders of the Male Reproductive System	233	0.2	6,234	26.8
13 – Diseases and Disorders of the Female Reproductive System	245	0.2	6,541	26.7
14 – Pregnancy, Childbirth and the Puerperium	S	0.0	133	26.6
15 - Newborns and other Neonates with Conditions Originating in Perinatal Period	17	0.0	612	36.0
16 - Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	1,081	1.0	23,578	21.8
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	1,185	1.1	28,067	23.7
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	3,251	3.1	96,181	29.6
19 – Mental Diseases and Disorders	7,861	7.5	281,083	35.8
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	405	9.4	6,880	24.4
21 – Injuries, Poisonings and Toxic Effects of Drugs	683	0.7	19,372	28.4
22 – Burns	29	0.0	1,069	36.9
23 - Factors Influencing Health Status and Other Contacts with Health Services	6,805	6.5	162,703	23.9
24 – Multiple Significant Trauma	226	0.2	7,921	35.0
25 – Human Immunodeficiency Virus Infections	21	0.0	693	33.0
Other DRGs	122	0.1	5,123	42.0
Pre MDC	170	0.2	14,261	83.9
Grand Total	104,971	100.0	2,893,491	27.6
Source: data from the Ministry of Health - CDO 2016				

Source: data from the Ministry of Health - SDO 2016

Table S/36 – Activities of private hospitals (accredited healthcare facilities) classified according to specialty. Year 2013 (National Data)

			Total	0		AIOP-ass	ociated Priva	tte hospitals (a	AIOP-associated Private hospitals (accredited healthcare facilities)	are facilities)
Specialty	Patient	Inpatients	In-hospital	Average	Occupancy	Patient	Inpatients	In-hospital	Average	Occupancy
	beds		days	length of stay	rate %	beds		days	length of stay	rate %
Angiology	34	619	6,052	8.6	48.8	16	231	2,560	11.1	43.8
Casualty department	12	1,056	5,084	4.8	116.1					
Heart Surgery	542	23,262	166,160	7.1	84.0	439	17,591	131,820	7.5	82.3
Cardiology	1,355	83,976	345,103	4.1	8.69	1,094	64,151	277,604	4.3	69.5
General Surgery	4,501	158,828	618,865	3.9	37.7	3,712	131,469	506,810	3.9	37.4
Maxillofacial surgery	59	2,527	3,821	1.5	18.0	52	2,483	3,710	1.5	19.5
Pediatric surgery	23	335	1,152	3.4	13.7	13	131	618	4.7	13.0
Plastic surgery	54	1,664	4,882	2.9	24.8	27	970	3,531	3.6	35.8
Thoracic surgery	99	1,617	10,334	6.4	9.09	53	1,520	9,487	6.2	49.0
Vascular surgery	320	12,539	55,407	4.4	47.4	254	9,927	41,491	4.2	8.44
Palliative care / Hospice	13	210	3,124	14.9	65.8	13	210	3,124	14.9	65.8
Dermatology	8	5	21	4.2	0.7	∞	5	21	4.2	0.7
Gastroenterology	31	816	6,410	7.9	26.7	28	675	5,548	8.2	54.3
Geriatrics	544	16,705	142,373	8.5	71.7	467	12,361	116,253	9.4	68.2
Long-stay care pts	4,641	45,689	1,277,946	28.0	75.4	3,043	32,021	817,079	25.5	73.6
Endocrine, nutr. and metabolic diseases	37	635	5,820	9.2	43.1	37	635	5,820	9.5	43.1
General medicine	4,434	135,423	1,054,990	7.8	65.2	3,659	114,733	888,180	7.7	66.5
Nephrology	105	3,081	18,443	0.9	48.1	99	2,251	13,534	0.9	56.2
Neonatology	99	2,783	13,592	4.9	56.4	17	519	2,067	4.0	33.3
Neurosurgery	186	9,169	42,506	4.6	62.6	147	7,634	33,147	4.3	61.8
Neurology	894	17,397	218,648	12.6	67.0	738	12,577	187,082	14.9	69.5
Neurological rehabilitation	434	3,028	150,211	49.6	94.8	264	1,720	006'06	52.8	94.3
Day nursery	75	3,147	9,705	3.1	35.5	75	3,147	9,705	3.1	35.5
Ophthalmology	388	9,201	22,293	2.4	15.7	299	5,628	15,979	2.8	14.6
Oncology	454	16,679	107,291	6.4	7:49	390	14,974	95,769	6.4	67.3
Orthopedics and Traumatology	4,137	207,022	807,802	3.9	53.5	3,437	175,381	683,588	3.9	54.5
Obstetrics and gynaecology	1,905	101,546	362,798	3.6	52.2	1,376	74,577	259,824	3.5	51.7
Otorhinolaryngology	582	19,367	45,041	2.3	21.2	485	15,008	36,620	2.4	20.7
Pediatrics	72	3,850	21,945	5.7	83.5	14	846	4,132	4.9	6.08
Pneumology	159	5,097	41,913	8.2	72.2	119	3,815	30,382	8.0	6.69
Psychiatry	1,894	20,600	530,486	25.8	7.97	1,689	18,652	487,565	26.1	79.1
Radiation Therapy	10	114	1,142	10.0	31.3	10	114	1,142	10.0	31.3
			,							

(Continued) Table S/36 – Activities of private hospitals (accredited healthcare facilities) classified according to specialty. Year 2013 (National Data)

			Iotal			Sch-1OIL	ociatea Friva	ne nospuais (a	101 -ussociaiea Frivaie nospiiais (accreaiiea neaiincare Jaciiiiies,	are jacinies,
Specialty	Patient	Inpatients	In-hospital	Average	Occupancy	Patient	Inpatients	In-hospital	Average	Occupancy
	beds		days	length of stay	rate %	beds		days		rate %
Functional recovery and rehabilitation	11,296	151,245	3,612,651	23.9	9.78	7,006	688,96	2,280,481	23.5	89.2
Rheumatology	45	1,845	14,230	7.7	9.98	15	919	7,541	8.2	137.7
Intensive care	302	11,226	58,159	5.2	52.8	201	6,701	39,603	5.9	54.0
Neonatal intensive care	34	808	10,787	13.4	6.98	∞	237	4,225	17.8	144.7
Coronary care unit	14	8,940	34,311	3.8	65.3	88	4,727	22,435	4.7	8.69
Spinal care unit	25	152	8,932	58.8	6.76					
Urology	1,079	49,977	197,230	3.9	50.1	863	38,976	155,526	4.0	49.4
Total	40,950	1,109,536	10,037,660	0.6	67.2	30,222	856,917	7,274,903	8.5	65.9

Table S/58 – Activities of private hospitals (accredited healthcare facilities) classified according to specialty. Year 2013 (North)

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			TOTAL			ocen- row	ciaica i i i vai	e nospituis (acci	ו במוובמ וובמוווו	are jucinies)
Specialty	Patient	Inpatients	In-hospital	Average	Occupancy	Patient	Inpatients	In-hospital	Average	Occupancy
Grand Company	beds		days	length	rate %	peds		days	length	rate %
				of stay					of stay	
Heart Surgery	240	8,496	70,138	8.3	80.1	192	6,825	55,102	8.1	9.87
Cardiology	518	28,592	119,813	4.2	63.4	439	23,635	101,603	4.3	63.4
General Surgery	1,466	56,958	197,605	3.5	36.9	1,163	44,003	153,539	3.5	36.2
Maxillofacial surgery	31	774	1,549	2.0	13.7	31	774	1,549	2.0	13.7
Plastic surgery	24	1,080	2,777	2.6	31.7	10	538	1,969	3.7	53.9
Thoracic surgery	43	1,126	988'9	6.1	43.9	43	1,126	9886	6.1	43.9
Vascular surgery	171	7,387	33,130	4.5	53.1	128	5,796	24,788	4.3	53.1
Palliative care / Hospice	13	210	3,124	14.9	65.8	13	210	3,124	14.9	65.8
Dermatology	∞	S	21	4.2	0.7	∞	5	21	4.2	0.7
Gastroenterology	2	84	474	5.6	64.9	2	84	474	5.6	64.9
Geriatrics	199	7,697	52,862	6.9	72.8	144	4,007	34,874	8.7	66.4
Long-stay care pts	2,584	30,000	774,658	25.8	82.1	1,714	22,154	527,365	23.8	84.3
General medicine	1,999	52,481	453,014	8.6	62.1	1,560	41,469	353,870	8.5	62.1
Nephrology	10	362	2,612	7.2	71.6					
Neonatology	28	1,586	7,911	5.0	77.4					
Neurosurgery	96	5,325	23,183	4.4	66.2	9/	4,167	16,734	4.0	60.3
Neurology	187	6,542	42,587	6.5	62.4	125	4,091	28,882	7.1	63.3
Neurological rehabilitation	234	1,855	78,461	42.3	91.9	119	763	39,235	51.4	90.3
Ophthalmology	138	2,566	5,043	2.0	10.0	94	1,835	3,737	2.0	10.9
Oncology	82	2,124	15,191	7.2	50.8	30	1,008	7,336	7.3	67.0
Orthopedics and Traumatology	1,686	101,840	363,208	3.6	59.0	1,347	86,973	308,701	3.5	62.8
Obstetrics and gynaecology	461	22,323	72,670	3.3	43.2	295	13,579	38,334	2.8	35.6
Otorhinolaryngology	239	10,997	24,039	2.2	27.6	200	8,531	19,589	2.3	26.8
Pediatrics	72	3,850	21,945	5.7	83.5	14	846	4,132	4.9	6.08
Pneumology	27	355	3,705	10.4	37.6	27	355	3,705	10.4	37.6
Psychiatry	917	10,554	251,305	23.8	75.1	845	9,353	236,691	25.3	7.97
Functional recovery and rehabilitation	6,076	87,532	1,995,836	22.8	0.06	3,712	53,677	1,220,611	22.7	90.1
Intensive care	139	5,289	27,537	5.2	54.3	108	3,414	20,649	0.9	52.4
Neonatal intensive care	17	549	6,316	11.5	101.8					
Coronary care unit	32	1,774	5,748	3.2	49.2	23	823	3,324	4.0	39.6
Urology	463	22,157	86,720	3.9	51.3	324	15,299	59,910	3.9	50.7
Total	18,202	472,821	4,750,068	10.0	71.5	12,786	348,233	3,276,734	9.4	70.2
Source: processing hi Femanaia - data from	m the Ministr	of Health								

Source: processing by Ermeneia - data from the Ministry of Health

Table S/59 – Activities of private hospitals (accredited healthcare facilities) classified according to specially. Year 2013 (Center)

			Total			AIOP-ass	sociated Prive	tte hospitals (a	410P-associated Private hospitals (accredited healthcare facilities	care facilities)
Specialty	Patient	Inpatients	In-hospital	Average	Occupancy	Patient	Inpatients	In-hospital	Average	Occupancy
	beds		days	length of stay	rate %	beds		days	length of stay	rate %
Angiology	26	472	5,288	11.2	55.7	8	84	1,796	21.4	61.5
Casualty department	12	1,056	5,084	4.8	116.1					
Heart Surgery	54	1,911	12,352	6.5	62.7	32	730	7,751	10.6	66.4
Cardiology	112	4,769	23,905	5.0	58.5	73	2,319	15,313	9.9	57.5
General Surgery	749	23,544	96,180	4.1	35.2	613	20,580	81,834	4.0	36.6
Vascular surgery	10	342	1,283	3.8	35.2	10	342	1,283	3.8	35.2
Geriatrics	51	1,003	16,354	16.3	87.9	51	1,003	16,354	16.3	6.78
Long-stay care pts	876	9,616	327,542	34.1	91.8	558	5,760	178,200	30.9	87.5
Endocrine, nutr. and metabolic diseases	10	33	304	9.2	8.3	10	33	304	9.2	8.3
General medicine	961	25,798	215,292	8.3	61.4	799	22,655	185,810	8.2	63.7
Nephrology	47	699	4,603	8.1	26.8	27	495	3,434	6.9	34.8
Neonatology	16	428	1,643	3.8	28.1	6	45	73	1.6	2.2
Neurosurgery	14	257	1,975	7.7	38.6					
Neurology	41	469	12,063	25.7	9.08	30	217	10,270	47.3	93.8
Neurological rehabilitation	55	216	20,085	93.0	100.0					
Ophthalmology	95	1,505	2,396	1.6	6.9	69	1,288	2,076	1.6	8.2
Oncology	35	1,062	7,315	6.9	57.3	35	1,062	7,315	6.9	57.3
Orthopedics and Traumatology	286	44,750	186,132	4.2	51.7	821	39,159	157,188	4.0	52.5
Obstetrics and gynaecology	236	11,646	38,769	3.3	45.0	201	8,587	28,644	3.3	39.0
Otorhinolaryngology	120	2,142	4,377	2.0	10.0	86	1,121	2,795	2.5	7.8
Pneumology	24	713	6,751	9.5	77.1	24	713	6,751	9.5	77.1
Psychiatry	282	2,885	93,244	32.3	9.06	189	2,263	66,731	29.5	2.96
Functional recovery and rehabilitation	1,950	23,486	609,192	25.9	85.6	1,022	13,115	321,438	24.5	86.2
Intensive care	27	1,184	5,274	4.5	53.5	4	337	640	1.9	43.8
Coronary care unit	28	1,700	6,376	3.8	62.4	8	647	1,829	2.8	62.6
Urology	128	6,274	22,019	3.5	47.1	109	5,662	18,930	3.3	47.6
Total	7,048	164,473	1,725,798	10.5	1.79	4,800	125,653	1,116,759	8.9	63.7
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Source: processing by Ermeneia – data from the Ministry of Health

Table 8/60 — Activities of private hospitals (accredited healthcare facilities) classified according to specialty. Year 2013 (South)

,			Total			AIOP-ass	ociated Priva	tte hospitals (a	AIOP-associated Private hospitals (accredited healthcare facilities)	are facilities)
Specialty	Patient	Inpatients	In-hospital	Average	Occupancy	Patient	Inpatients	In-hospital	Average	Occupancy
	beds		days	length of stay	rate %	beds		days	length of stay	rate %
Angiology	8	147	764	5.2	26.2	8	147	764	5.2	26.2
Heart Surgery	248	12,855	83,670	6.5	92.4	215	10,036	296,89	6.9	87.9
Cardiology	725	50,615	201,385	4.0	76.1	582	38,197	160,688	4.2	75.6
General Surgery	2,286	78,326	325,080	4.2	39.0	1,936	988,99	271,437	4.1	38.4
Maxillofacial surgery	28	1,753	2,272	1.3	23.0	21	1,709	2,161	1.3	28.2
Pediatric surgery	23	335	1,152	3.4	13.7	13	131	618	4.7	13.0
Plastic surgery	30	584	2,105	3.6	19.2	17	432	1,562	3.6	25.2
Thoracic surgery	13	491	3,448	7.0	72.7	10	394	2,601	9.9	71.3
Vascular surgery	139	4,810	20,994	4.4	41.4	116	3,789	15,420	4.1	36.4
Gastroenterology	29	732	5,936	8.1	56.1	26	591	5,074	9.8	53.5
Geniatrics	294	8,005	73,157	9.1	68.2	272	7,351	65,025	8.8	65.5
Long-stay care pts	1,079	6,073	175,746	28.9	44.6	771	4,107	111,514	27.2	39.6
Endocrine, nutr. and metabolic diseases	27	602	5,516	9.2	56.0	27	602	5,516	9.2	56.0
General medicine	1,474	57,144	386,684	8.9	71.9	1,300	50,609	348,500	6.9	73.4
Nephrology	48	2,150	11,228	5.2	64.1	39	1,756	10,100	5.8	71.0
Neonatology	22	692	4,038	5.3	50.3	∞	474	1,994	4.2	68.3
Neurosurgery	9/	3,587	17,348	4.8	62.5	7.1	3,467	16,413	4.7	63.3
Neurology	999	10,386	163,998	15.8	67.5	583	8,269	147,930	17.9	69.5
Neurological rehabilitation	145	957	51,665	54.0	9.76	145	957	51,665	54.0	9.76
Day nursery	75	3,147	9,705	3.1	35.5	75	3,147	9,705	3.1	35.5
Ophthalmology	155	5,130	14,854	2.9	26.3	136	2,505	10,166	4.1	20.5
Oncology	337	13,493	84,785	6.3	6.89	325	12,904	81,118	6.3	68.4
Orthopedics and Traumatology	1,464	60,432	258,462	4.3	48.4	1,269	49,249	217,699	4.4	47.0
Obstetrics and gynaecology	1,208	67,577	251,359	3.7	57.0	880	52,411	192,846	3.7	0.09
Otorhinolaryngology	223	6,228	16,625	2.7	20.4	187	5,356	14,236	2.7	20.9
Pneumology	108	4,029	31,457	7.8	79.8	89	2,747	19,926	7.3	80.3
Psychiatry	695	7,161	185,937	26.0	73.3	655	7,036	184,143	26.2	77.0
Radiation Therapy	10	114	1,142	10.0	31.3	10	114	1,142	10.0	31.3
Functional recovery and rehabilitation	3,270	40,227	1,007,623	25.0	84.4	2,272	30,097	738,432	24.5	0.68
Rheumatology	45	1,845	14,230	7.7	9.98	15	616	7,541	8.2	137.7
Intensive care	136	4,753	25,348	5.3	51.1	68	2,950	18,314	6.2	56.4
Neonatal intensive care	17	259	4,471	17.3	72.1	∞	237	4,225	17.8	144.7
Coronary care unit	84	5,466	22,187	4.1	72.4	57	3,257	17,282	5.3	83.1
Spinal care unit	25	152	8,932	58.8	6.76					
Urology	488	21,546	88,491	4.1	49.7	430	18,015	76,686	4.3	48.9
Total	15,700	472,242	3,561,794	7.5	62.2	12,636	383,031	2,881,410	7.5	62.5
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Source: processing by Ermeneia - data from the Ministry of Health

Table S/61 – Differences of healthcare options across the country, assessed according to patient mobility using data on hospital admissions (a). Years 2012-2016

777	20	2012	2013	3	20	2014	20	2015		. 4	9102	
Regions	Inflow	Outflow	Inflow	Outflow	Molful	Outflow	Inflow	Outflow	Inflow	Outflow	MoltinO/wolful	Mobility
											Ratio	balance (b)
- Piedmont	0.84	1.19	0.83	1.20	98.0	1.17	0.84	1.19	88.0	1.14	1.3	-4,050
 Aosta Valley 	0.59	1.69	89.0	1.47	69.0	1.45	69.0	1.45	0.78	1.28	1.6	-544
 Lombardy 	2.47	0.40	2.48	0.40	2.44	0.41	2.53	0.39	2.64	0.38	0.1	74,522
 A.P. of Trento 	0.61	1.63	0.61	1.65	0.63	1.60	0.65	1.54	0.65	1.55	2.4	-3,077
- Veneto	1.13	68.0	1.14	0.88	1.17	0.85	1.27	0.79	1.30	0.77	9.0	9,644
 Friuli V.G. 	1.57	0.64	1.52	99.0	1.56	0.64	1.30	0.77	1.35	0.74	0.5	3,251
 Liguria 	0.72	1.39	0.70	1.44	89.0	1.47	89.0	1.47	99.0	1.51	2.3	-9,500
 Emilia Romagna 	2.39	0.42	2.43	0.41	2.44	0.41	2.41	0.41	2.39	0.42	0.2	46,983
 Tuscany 	1.97	0.51	1.97	0.51	2.00	0.50	1.98	0.51	1.95	0.51	0.3	24,617
- Umbria	1.34	0.75	1.34	0.75	1.46	69.0	1.40	0.71	1.30	0.77	9.0	4,188
 Marche 	0.88	1.14	0.93	1.07	0.92	1.09	0.84	1.19	08.0	1.24	1.5	-4,803
- Lazio	1.04	96.0	0.99	1.01	0.92	1.08	0.87	1.15	98.0	1.16	1.4	-7,913
Abruzzo	0.71	1.42	99.0	1.52	0.64	1.57	0.67	1.49	89.0	1.48	2.2	-8,541
- Molise	1.20	0.83	1.18	0.85	1.17	0.85	1.16	98.0	1.04	96.0	6.0	579
 Campania 	0.32	3.16	0.33	3.07	0.32	3.10	0.33	3.00	0.32	3.12	6.7	-37,061
- Apulia	0.52	1.91	0.54	1.84	0.55	1.82	0.55	1.81	0.57	1.74	3.0	-17,862
 Basilicata 	0.71	1.41	0.73	1.37	0.83	1.20	0.82	1.22	0.79	1.27	1.6	-3,612
 Calabria 	0.15	6.54	0.13	7.55	0.12	8.01	0.12	8.18	0.12	8.47	71.7	-35,473
 Sicily 	0.29	3.47	0.30	3.36	0.31	3.24	0.28	3.61	0.25	3.98	15.9	-25,594
- Sardinia	0.35	2.85	0.33	3.04	0.33	3.02	0.33	3.05	0.33	2.99	8.9	-6,680
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Data related to the Autonomous Province of Bolzano have not been provided here as they are strongly biased by migration abroad (notably to Austria). (a) Mobility has been provided in percentage of incoming and outgoing acute patients, calculated on the inter-regional mobility matrices. (b) Active and passive mobility balance of acute patients of each region.

Source: processing by Ermeneia – data from the Ministry of Health

3. Staff information

3.1. Staff fluctuation over the years

The 2016 staffing levels recorded by the Ministry of Health using the new transmission methods based on the direct insertion of data on the web platform, seem to lead to a stabilization of the trend of gradual downsizing of the workforce registered by the whole of public hospital facilities since 2010, a trend that led to an overall reduction of 10.3% up until 2015. Thus, the decisive inversion of trend is slowing down with respect to the growth observed in 2009, which we had in any case mainly attributed to the creation of new hospital centers and to a radical reclassification undertaken with the inclusion, among the directly managed hospitals and among the hospital centers, of some institutions previously included among the so-called 'assimilated' public hospitals. As always, it should be stressed that the values indicated do not include freelance or similarly employed personnel, which have nevertheless become part of the workforce over the last few years.

On the other hand, a look at the trends recorded in the period 2012-2016 (see Table S/62), shows that there was a decrease of 11,732 units, with the number of personnel going from 466,834 to 455,102 employees, resulting in a corresponding reduction of 2.5%.

Looking at the public facilities under consideration, that is the hospital centers (including those integrated with universities) and hospitals directly managed by local health authorities, and again taking into account what has already been explicitly stated, we can see the differences in the dynamics among the different professional figures during the period considered: a decline in the number of doctors by 948 units, of nurses by 6,067 units, and of other staff by 4,717 units, as shown by the data in the following table:

		2012	2016
_	Medical doctors and Dentists	85,689	84,741
_	Nurses	216,619	210,552
_	Other staff	164,526	159,809

An analysis of the indicator that shows the relationship between the personnel of the public facilities and the updated data on number of patient beds, shows that there is also a slight improvement for 2015 and 2016 for both hospital centers and the hospitals of the local health authorities, noting however that the trend of these relationships continues to be strongly influenced by the change in the classifications and the changes of recent years in the public sphere (see Table S/64).

Moving to the side of the hospitalization system in which the accredited facilities that are part of AIOP operate, we can see an increase between 2012 and 2017 of 3,866 units, equal to +5.8% increase (Table S/65). This is an increase that affects both the medical staff and, to a greater extent, the nurses and the other personnel, yet once again taking into account the fact that the overall number of staff and their compositional breakdown into the various professional roles is strongly influenced by the variability in the size and in the type of the entire grouping of facilities (Table S/66).

3.2. Staff distribution throughout Italy

Healthcare personnel working in the public and private hospitals of the National Health Service as a whole amounted to more than 633,000 units (Table S/67), as shown in the latest ISTAT survey available, which, however, shows the situation once again relate to 2013. It shows a significant variability by region and by professional figure compared to the previous period, most likely due to a change in the method of data collection and classification.

The North continues to distinguish itself from the other territorial areas, as the part of the country in which all the professional components are most represented in the hospital, with an incidence on the total amounting to 52%.

The numbers and distributions of the employees of AIOP facilities, for which we have data updated at the end of 2017, are instead shown in Table S/68, which makes it possible to observe that the total number of operators employed was 62,686 units. The overall workforce of these facilities is rounded out by 7,467 units of medical personnel and 4,694 units of non-medical personnel, whose services are offered through freelance collaboration agreements.

Table S/62 – Staff trends in Hospital Centers and in the local health service (ASL) hospitalization facilities^(a) (A.V.)

		2012	2	2013	•	2014	2	2015	• •	2016
Type of institution	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL
	Centers	hospitalization	Centers (*)	hospitalization	Centers	hospitalization	Centers (*)	hospitalization	Centers	hospitalization
Role	*	facilities (**)		facilities (**)	*	facilities (**)		facilities (**)	*	facilities (**)
Medical doctors and										
Dentists	35,227	50,462	34,953	50,193	34,646	50,070	33,640	50,095	33,785	50,956
Nurses	93,900	122,719	93,622	120,679	93,119	119,010	90,937	119,313	960,06	120,456
Other	81,619	82,907	81,072	81,999	79,862	80,172	76,894	79,721	77,163	82,646
Total	210,746	256,088	209,647	252,871	207,627	249,252	201,471	249,129	201,044	254,058
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a) Staff working as self-employed professionals or similar contract types were not included.

(*) NHS staff and University staff.

Source: data processed by Ermeneia from the Report "Attività gestionali ed economiche delle Asl e Aziende Ospedaliere", Ministry of Health, Years 2012, 2013, (**) Residual mental health facilities are included.

Table 8/63 — Hoenital Center and local health consice (481) hoenitalization facility staff® (6, yar)

table 3/05 – Hospital Cel		ter ana tocat neatth serv	исе (АЗЕ) пс	nspitatization ja	cuity staff" ((% var.)				
	20	013/2012	201	2014/2013	201.	2015/2014	201	2016/2015	201	2016/2012
	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL
	Centers (*	*) hospitalization	Centers (*)	hospitalization	Centers (*)	hospitalization	Centers (*)	hospitalization	Centers (*)	hospitalization
		facilities (**)		facilities (**)		facilities (**)		facilities (**)		facilities (**)
Medical doctors an	p									
Dentists	-0.8	-0.5	6.0-	-0.2	-2.9	0.0	0.4	1.7	-4.1	1.0
Nurses	-0.3	-1.7	-0.5	-1.4	-2.3	0.3	6.0-	1.0	-4.1	-1.8
Other	-0.7	-1.1	-1.5	-2.2	-3.7	-0.6	0.3	3.7	-5.5	-0.3
Total	-0.5	-1.3	-1.0	-1.4	-3.0	0.0	-0.2	2.0	-4.6	-0.8

a) Staff working as self-employed professionals or similar contract types were not included.

*) NHS staff and University staff.

(**) Residual mental health facilities are included.

Source: data processed by Ermeneia from the Report "Attività gestionali ed economiche delle Asl e Aziende Ospedaliere", Ministry of Health, Years 2012, 2013, 2014, 2015 and 2016

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		2012		2013		2014		2015	,	2016
	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL	Hospital	ASL
	Centers	hospitalization	Centers h	hospitalization	Centers	s hospitalization		Centers hospitalization	Centers	hospitalization
	*	facilities (**)	*	facilities (**)	*	facilities (**)		facilities (**)	*	facilities (**)
Medical doctors per 10 patient beds	7.7	4.5	7.8	4.7	7.9	4.8	8.4	6.1	8.5	6.4
Nurses per 10 patient beds	20.6	11.0	20.8	11.3	21.3	11.4	22.8	14.6	22.6	15.0
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Note: the numbers of medical doctors and nurses per patient bed has been calculated considering patient beds actually used. (**) Residual mental health facilities are included. NHS staff and University staff.

Source: data processed by Ermeneia from the Report "Attività gestionali ed economiche delle Asl e Aziende Ospedaliere", Ministry of Health, Years 2012, 2013,

2014, 2015 and 2016

Table S/65 – Staffworking in medical institutions associated with AIOP. 2011-2016 Years 2012-2017

Table 5/05 Staff Working in medical mislimuons associated with 11101: 2011 2010 1cals 2012 2017	Transacra Manager	21 0102 1102 101	1100 0100 011			
Role	2012	2013	2014	2015	2016	2017
Contract employee and self-employed doctors	11,810	11,773	11,815	11,948	12,191	12,340
Nurses	20,032	19,175	19,316	20,032	21,147	21,241
Other	34,445	34,242	34,537	34,445	36,307	36,572
Total	66.287	65.190	65.668	66,425	69,645	70.153

Note: surveying data related to staff can be significantly affected by institutions entering or leaving AIOP over the years. Source: processing by Ermeneia - data from AIOP

Table S/66 – Staff working in medical institutions associated with AIOP Years 2012-2017 (% var.)

	2013/2012	2014/2013	2015/2014	2016/2015	2017/2016	2017/2012
Contract employee and self-employed doctors	-0.3	0.4	1.1	2.0	1.2	4.5
Nurses	4.3	0.7	3.7	5.6	0.4	0.9
Other	-0.6	6.0	-0.3	5.4	0.7	6.2
Total	-I.7	0.7	1.2	4.8	0.7	5.8
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Note: surveying data related to staff can be significantly affected by institutions entering or leaving AIOP over the years. Source: processing by Ermeneia - data from AIOP

 Table S/67 – Total number of healthcare personnel employed in various healthcare institutions, by region. Year 2013

Regions	Medical personnel	Nursing staff	Other staff	Total staff
Piedmont	9,477	20,078	21,750	51,305
Aosta Valley	354	591	657	1,602
Lombardy	22,026	48,097	54,356	124,479
Trentino-Alto Adige	1,906	5,871	8,035	15,812
Autonomous Province of Bolzano	948	3,203	4,785	8,936
Autonomous Province of Trento	958	2,668	3,250	9,876
Veneto	8,494	22,445	19,530	50,469
Friuli Venezia Giulia	2,715	6,527	6,555	15,797
Liguria	3,702	8,879	7,053	19,634
Emilia Romagna	9,854	21,905	18,513	50,272
Tuscany	8,362	17,898	13,588	39,848
Umbria	1,933	3,827	2,827	8,587
Marche	3,586	8,760	6,472	18,818
Lazio	13,243	26,276	22,904	62,423
Abruzzo	2,530	6,023	3,940	12,493
Molise	651	1,482	1,345	3,478
Campania	9,817	19,299	13,735	42,851
Apulia	7,093	16,084	12,203	35,380
Basilicata	1,085	2,650	2,137	5,872
Calabria	3,221	6,273	4,949	14,443
Sicily	10,223	17,923	14,206	42,352
Sardinia	4,156	7,282	5,377	16,815
North	58,528	134,393	136,449	329,370
Center	27,124	56,761	45,791	129,676
South	38,776	77,016	57,892	173,684
Itah	124 428	021890	240 132	632 730

Table S/68 − Staffworking in medical institutions associated with AIOP Updated to December, 31st 2017

			Š	Contract employee onergoes	actore			Self-employed	ployed
	Modical	Mireos	Tochnicians	Auxilian; staff	Other careaver	Other staff	Total	Modical	Non-
Regions	personnel	Nurses	i echinicians	in Health and	Staff	Omer sady	i oidi	personnel	medical
	4			Social Care	3			,	personnel
				Settings					,
Piedmont	195	1,044	301	447	485	966	3,468	529	325
Aosta Valley		12	4	ж	14	6	43	2	23
- Lombardy	1,290	5,462	1,621	1,096	1,816	4,282	15,567	2,152	897
 A.P. of Bolzano 	3	29	33	21	33	39	196	10	6
- A.P. of Trento	17	81	25	37	88	72	320	5	15
- Veneto	280	1,400	407	213	743	917	3,960	314	163
 Friuli Venezia Giulia 	57	203	94	29	151	235	692	48	43
– Liguria	3	86	15	S	12	120	253	11	39
 Emilia Romagna 	153	1,977	466	386	918	1,063	4,963	999	547
- Tuscany	117	276	160	115	380	337	1,685	395	158
– Umbria	11	73	21	45	55	55	260	89	11
Marche	78	340	69	77	150	265	626	123	82
- Lazio	617	3,309	1,256	1,731	1,170	2,551	10,634	1,234	828
Abruzzo	132	298	175	240	58	569	1,472	69	20
Molise	82	114	45	11	19	145	416	5	390
 Campania 	794	2,076	736	761	628	1,497	6,492	551	502
- Apulia	346	1,292	432	260	146	833	3,609	96	245
 Basilicata 	13	81	30	11	138	79	352	18	ю
Calabria	203	808	166	224	264	419	1,784	224	139
Sicily	366	1,527	356	848	135	1,152	4,384	843	158
Sardinia	115	403	70	80	164	248	1,080	104	26
Italy	4,873	21,241	6,482	6,940	7,567	15,583	62,686	7,467	4,694
Source: AIOP									

167

4. Spending data

4.1. Economic flow trends over the years

The expenditure of the National Health Service, described in the usual analytical components at consolidated values, was also determined for 2016 on the basis of the information coming from the two different institutional sources used starting in 2013, due to the continual lack of updates to the "Health Report" contained in the various editions of the General Report on the Country's Economic Situation. This document, produced up until 2012, made it possible to extrapolate the historical series of coordinated data flows on health expenditure, but as to the resumption of production of these flows the Ministry for the Economy and Finance continues to give no indication. The new historical data in use this year for the period 2012-2016, already slightly corrected for some values starting in 2009, is still suffering from the interruption encountered in 2012, and because the definition of the different healthcare spending components adopted by the sources used for 2013 – Court of Auditors and Agenas – criteria may not fully correspond to the data from previous years.

Total public spending for the area of hospitalizations is estimated at just over EUR 63 billion for 2016, compared to EUR 62.3 billion a year earlier (with a 1.2% increase) (Table S/69).

Within this financing aggregate, the amount assigned to the activity of private hospitals (accredited healthcare facilities) was EUR 4.3 billion, equal to 6.9% of total public hospital expenditure; an incidence confirmed over the last few years after the constant decrease from the 8.4% registered in 2000, as a direct consequence also of the effects of the spending review measure (Law 135/12) described in previous editions of this Report and of the subsequent penalizing measures to contain health care spending.

The representation at constant prices of spending levels (Table S/70) again this year follows the determination of the calculation based on the GDP

deflator of the ISTAT series chained to 2010; the change in total public hospital spending between the base year and 2016 is thus equal to -2.8%, a less marked decrease compared to that recorded by total healthcare spending (-4.8%). In the same period, on the other hand, spending for private hospitals (accredited healthcare facilities) experienced, in real terms, a more marked reduction (-8.6%), above all due to the cuts in the fees paid in this area (both in terms of fee levels and budgeting). The generally unfavorable trend of spending data at constant prices, however, was influenced by the value of real GDP, according to the estimates confirmed once again in the DEF 2018, in fact, the indicator of national wealth reversed its negative trend starting only in 2015, recording a decrease of -1.8% compared to 2010.

4.2. Health expenditure comparisons

The updated October 2018 edition of OECD "Health Data" allows us to construct the usual framework for comparing health care spending within the group of 24 of the largest member countries of the organization. Table S/71 shows those most commonly indicators used by industry analysts: the incidence of total health expenditure and of public health expenditure compared to GDP.

In 2016, the propensity for the gradual decline in resources in terms of GDP assigned to the NHS continues to be seen for Italy, thereby accentuating the gap accumulated over time compared to the average for both OECD Europe countries and those of the G7 group (6.7% compared to 7.2% and 9.1%, respectively). A trend whose transience is officially denied by the forecast data of the latest version of the Economy and Finance Document produced by the Ministry of Economy and Finance and released as an update memorandum last October, data that would, in the absence of subsequent adjustments, direct the spending curve – GDP towards a value of 6.4% in 2020. This is a value dramatically distant from that of countries like France and Germany with which we should easily be able to compare ourselves due to economic and cultural similarities.

Even in terms of total health expenditure, Italy shows a ratio to GDP below the average of the G7 countries (8.9% compared to 11.4%), still remaining below the average of OECD Europe (which is 9.4%).

The almost invariant trend in the three-year period 2014-2016 for Italian health care spending, which fell slightly to 8.9% according to the OECD, shows that, faced with the progressive decrease in public spending, a significant part of health needs is financed directly by the citizens or through old

and new forms of intermediation, circumstance which are confirmed in the specific caregiver survey referred to in Part Three of the 2017 Report. Again in terms of total health expenditure, Italy is still below the 2016 values of the most industrialized countries, the United States, France, Germany and Canada (which present values of 17.1%, 11.5%, 11.1% and 10.5%, respectively). And similarly, although with different relative positions, this is true for the first three countries mentioned also with regard to public healthcare spending.

Thus, despite expectations for renewed attention to be paid to the subject of financing of the National Health Service in this new political phase, the downsizing of Italy's commitment compared to the major Western countries in terms of its use of health resources in relationship to the wealth produced is reaffirmed. As is the prospect of a renewed progressive and creeping defunding, which may make our health care system slip into a new dimension defined as "selective universal care", within which new tools still in the planning phase and that relate to the so-called "Second pillar", might, according to some trains of thought, allow for renewed overall sustainability. The slight adjustments to the current values of the health fund included in the DEF, which bring the funding for 2018 to 116.3 billion, will not allow for the introduction of new resources intended to reduce the critical issues in terms of access to care, but will be rather more realistically absorbed by the additional charges (1.3 billion) linked to the renewal of employment contracts and the fulfillment of obligations relating to basic levels of assistance, especially in the area of high-cost drugs for cancer and hepatitis C.

Finally, if we consider in particular the amount of health care expenditure allocated to hospital activities provided on behalf of the NHS by public institutions and by the accredited private ones (Tab. S/72), again with reference to the year 2016, it can be noted that for Italy:

- has a higher proportion (57.8%%) of total public healthcare spending compared to the average for the G7 countries (44.2%), and compared to that of European OECD countries (45.5%);
- has a GDP spending ratio slightly above the average of the G7 countries and the European OECD countries (3.5% and 3.2%, respectively).

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	2012	2013	2014	2015	2016
Public hospital facilities	53.074	52.244	52.744	53.847	54.566
Accredited hospitals	8.659	8.255	8.425	8.466	8.484
including: private hospitals (accredited healthcare facilities)	4.471	4.263	4.289	4.335	4.351
Total public hospital system expenditure	61.733	60.499	61.169	62.313	63.050
Other expenditure features	51.950	51.185	51.504	50.354	50.681
Total public healthcare expenditure	113.683	111.684	112.673	112.667	113.731
(*) In the "General Report on Italy's economic situation" (RGE), in 2012, there was a further update of the time series data on spending, but this series however	in 2012, there was	a further update of	the time series dat	a on spending, but	this series however
experienced a break due to the uncertainty of the continuity of its publication by the RGE in the future. For 2013, 2014 and 2015 the expenditure figures were	its publication by the	ne RGE in the futur	re. For 2013, 2014	and 2015 the exper	diture figures were

taken from the 2015, 2016 and 2017 Report on the coordination of public finance by the Court of Auditors and the Agenas Report on the monitoring of the spending of the Regions.

Source: data processed by Ermeneia from the "General Report on Italy's economic situation", 2012, Vol. II, from the 2015, 2016 and 2017 "Report on the coordination of public finance" by the Court of Auditors and the Agenas Report on the monitoring of the spending of the Regions.

Table S/70 – Healthcare expenditure at constant prices (*). Years 2012-2016 (in billions of euro)

	2012	2013	2014	2015	2016
Public hospital facilities	51.594	50.179	50.178	50.754	50.861
Accredited hospitals	8.418	7.929	8.015	7.980	7.908
including: private hospitals (accredited healthcare facilities)	4.346	4.094	4.080	4.086	4.056
Total public hospital system expenditure	60.011	58.108	58.193	58.734	58.769
Other expenditure features	50.501	49.162	48.998	47.461	47.240
Total public healthcare expenditure	110.513	107.269	107.191	106.195	106.009

Source: data processed by Ermeneia from the "General Report on Italy's economic situation", 2012, Vol. II, from the 2015, 2016 and 2017 "Report on the coordination of public finance" by the Court of Auditors and the Agenas Report on the monitoring of the spending of the Regions. (*) GDP deliator calculated on the basis of the new 151A1 series in a chained series with reference to 2010.

Table S/71 – Amount of total healthcare expenditure and public healthcare spending in relation to the GDP

% Values	Total he	althcare exp	oenditure	Public he	althcare ex	penditure
% values	2014	2015	2016	2014	2015	2016
United States	16.5	16.8	17.1	13.4	13.8	14.0
Japan	10.8	10.9	10.8	9.1	9.1	9.1
Germany	11.0	11.1	11.1	9.2	9.3	9.4
France	11.6	11.5	11.5	8.9	8.8	9.6
Italy	9.0	9.0	8.9	6.8	6.7	6.7
United Kingdom	9.7	9.8	9.8	7.7	7.8	7.8
Canada	10.0	10.4	10.5	7.0	7.3	7.4
Average of G7 countries (*)	11.2	11.4	11.4	8.9	9.0	9.1
Australia	9.1	9.3	9.3	6.1	6.4	6.3
Austria	10.4	10.3	10.4	7.7	7.7	7.7
Belgium	10.3	10.1	10.0	8.1	7.9	7.9
Denmark	10.2	10.3	10.4	8.6	8.6	8.7
Finland	9.5	9.7	9.5	7.1	7.3	7.1
Greece	8.0	8.2	8.5	4.6	4.8	5.2
Iceland	8.5	8.3	8.3	6.8	6.7	6.8
Ireland	9.7	7.4	7.4	6.8	5.3	5.3
Luxembourg	6.4	6.2	6.2	5.3	5.1	5.0
Holland	10.9	10.4	10.4	8.8	8.4	8.4
New Zealand	9.4	9.3	9.2	7.5	7.4	7.3
Norway	9.3	10.1	10.5	8.0	8.6	8.9
Portugal	9.0	9.0	9.1	6.0	5.9	6.0
Spain	9.0	9.1	9.0	6.4	6.5	6.4
Sweden	11.1	11.0	10.9	9.3	9.2	9.1
Switzerland	11.5	11.9	12.2	7.3	7.5	7.7
Turkey	4.3	4.1	4.3	3.4	3.2	3.4
Average of European OECD countries (*)	9.4	9.3	9.4	7.2	7.1	7.2
Average of all OECD countries (*)	9.8	9.8	9.8	7.5	7.5	7.6

^(*) Averages are calculated as unweighted arithmetic means.

Source: Ermeneia processing of "OECD Health Data 2018", OECD, Paris, November 2018

Table S/72 - Public and accredited hospital expenditure in relation to the public healthcare spending and the GDP

% Values	expend	d accredite liture / Tota lthcare spen	l public	Public and accredited hospital expenditure/GDP		
	2014	2015	2016	2014	2015	2016
United States	36.6	36.2	-	3.0	3.0	-
Japan	44.0	43.4	-	4.0	4.0	-
Germany	33.5	33.2	33.1	3.1	3.1	3.1
France	46.4	46.4	43.9	4.1	4.1	4.2
Italy	57.0	57.2	57.8	3.9	3.8	3.8
United Kingdom	47.7	48.4	48.5	3.7	3.8	3.8
Canada	38.9	37.9	37.5	2.7	2.8	2.8
Average of G7 countries (*)	43.4	43.2	44.2	3.5	3.5	3.5
Australia	50.9	50.7	-	3.1	3.2	-
Austria	46.7	46.4	46.9	3.6	3.6	3.6
Belgium	33.5	35.1	34.5	2.7	2.8	2.7
Denmark	49.7	49.6	49.5	4.3	4.3	4.3
Finland	41.5	42.7	43.5	2.9	3.1	3.1
Greece	50.4	47.7	48.5	2.3	2.3	2.5
Iceland	46.9	47.0	46.9	3.2	3.2	3.2
Ireland	35.2	35.1	35.5	2.4	1.9	1.9
Luxembourg	35.9	34.8	34.4	1.9	1.8	1.7
Holland	39.1	39.2	39.2	3.4	3.3	3.3
New Zealand	-	-	-	-	-	-
Norway	45.4	46.3	45.9	3.6	4.0	4.1
Portugal	54.1	54.2	54.9	3.2	3.2	3.3
Spain	55.3	56.3	56.0	3.5	3.7	3.6
Sweden	45.4	45.1	45.4	4.2	4.1	4.1
Switzerland	44.7	44.7	44.2	3.2	3.4	3.4
Turkey	54.5	54.9	55.6	1.8	1.8	1.9
Average of European OECD countries (*)	45.4	45.5	45.5	3.2	3.2	3.2
Average of all OECD countries (*)	44.9	44.9	45.1	3.2	3.2	3.2

(*) Averages are calculated as unweighted arithmetic means.

Source: Ermeneia processing of "OECD Health Data 2018", OECD, Paris, November 2018

Appendices

1. Methods applied

As is usual, different evaluation methods were used in the preparation of the 2018 Report.

The first method used is that of identifying and commenting upon some key phenomena of the last twelve months and placing them in the first part of this Report.

More specifically, the following phenomena were examined:

- a) the average performance levels of services even in the presence of signs of their deterioration in the perception of citizens and users, and keeping in mind the trend, in short, of the indicators of the complexity of the services provided, of the first results (after a trial period) of the level of effectiveness of the treatments, with reference to the data of the National Outcome Plan, to which was added the reference to the topic of the resources available for the National Health Services which highlights a permanent underfunding phenomenon compared to other countries;
- b) the phenomenon of the "funnel" represented by waiting lists that have been analyzed in various aspects both with reference to access to local health services and with reference to admission to hospitals, and with reactions to behaviors, opinions and assessments provided by users through a topical survey;
- c) the set of phenomena that have to do with access to Emergency Room services and related problems that may arise at the time of admission, assignment of an emergency code and the gradual performance of visits, any in-depth examinations in terms of tests and check-ups, and then the reporting of user reactions through opinions, behaviors and assessments given through a topical survey;
- d) the monitoring of the efficiency of the hospital system through an examination of the Income Statements of the public Hospital Centers and the highlighting of the evolution of any "anomalies" that might suggest the

possibility of implicit budget covering, with the consequent projection on overall public hospital expenditure of these levels of inefficiency.

As regards the examination of the Income Statements and the identification of any areas of inefficiency, we started from the reference data of 34 Hospital Centers (the same as last year) for the year 2017, in order to ascertain any potential "anomalies" it may have contained. More precisely:

1) the fundamental items of the aforementioned 34 Hospital Centers (Revenues, Costs, Operating Results) present in the Income Statements were updated to the fiscal year 2017, thus completing the data used in last year's Report covering the period 2013-2016. Table App. 1 below shows the items of the Income Statements for the individual Hospital Centers, grouping the results by the Regions they belong to and by the territorial areas of reference.

It should be pointed out that the 34 Hospital Centers represent 77.0% of the national total of 46 units (net of those of the Regions mentioned below). The territorial distribution is fairly well balanced between the North (13 units), the Center (7 units) and the South (14 units).

Not all of the Hospital Centers that were examined in the 2016 Report were used this time, as Lombardy (with 29 Hospital Centers) has changed its organizational system, incorporating territorial-type activities within the Centers. This has also been the case for some specific Centers in the Region of Friuli Venezia Giulia (1 unit) and the Region of Sardinia (1 unit);

2) four types of comparisons were then carried out, similar to those already used in the previous Report but with the addition of the 2017 operating data in absolute value, then reworked in the form of Index Numbers (as per Table App. 2) and in the percentage composition of the sub-items (as per Table App. 3).

It was thus possible to verify:

- the trend of the number of admissions compared to the trend of revenues from healthcare services and social health services;
- the trend in the number of admissions and the trend in costs for the purchase of goods and services;
- the trend in revenues from "by-function" activities, taking into account the percentage of such revenues out of those deriving from healthcare services and from co-payment charges, but also calculating the impact assessed on the basis of the mechanism envisaged by the Ministerial Decree implementing Art. 1, paragraph 526 of the 2016 Stability Law, starting from Art. 8-sexies of Legislative Decree 502/1992 and subse-

quent amendments. The Decree states that "the total amount of payment for "by-function" activities may not in any case exceed 30% of the already assigned payment limit". Please also note that the 2016 Income Statements of the Hospital Centers were already able to incorporate this provision, while directly managed Hospitals should have begun to incorporate it starting in 2017 (but this extension was suspended);

 and lastly, the trend of the incidence of the operating results over the last five years on the total revenues from health care services + the revenues from co-payment charges.

The commentary on the four trends just mentioned may be found in Section 4.1 of Part One;

3) in conclusion, it was also desired to further the comparison between the "real" data of the Income Statements and the "virtual" data reconstructed for the "by-function" activities, because it was intended to proceed with an updated simulation according to the methods also used in the Report 2017, in order to verify the impact of the possible consequences of the application of the implementing Ministerial Decree, cited in point 2) above, taking into account three possible flat-rate compensation schemes for the 34 public Hospital Centers examined. Based on this projection, the values derived from a second projection on directly managed Hospitals were also estimated.

In concrete terms we proceeded through the following phases:

- a) first of all, the theoretical amount of "by-function" activities exceeding the three rates, i.e. 20%, 25% and 30% was valued and calculated according to the formula set out in the aforementioned Ministerial Decree, on total revenues from health care services + co-payment charges. Then the total was compared with the "real" value of the "by-function" activities shown on the 2017 Income Statements, to which the actual results for the fiscal year 2017 were totaled algebraically: the purpose was to identify an initial "differentiation" of the values within which to place the potential irregular extra-revenues, as these cover the "by-function" activities too generously and because it was also necessary to take into account the operating losses which are nevertheless borne by State debt;
- b) the tables in App. 4, App. 5, and App. 6 were thus prepared, and show the comparison between the value of the "by-function" activities as shown on the 2017 Income Statements with the value of the "by-function" activities calculated on the basis of the Ministerial Decree ac-

cording to the three maximum schemes of 30%, 25%, and 20%. Furthermore, the difference between these two values added algebraically to the operating results makes it possible to define the "differentiation" referred to. The summary of the three aforementioned tables was then reported (as Table 25) in Section 4.2 of Part One.

At this point we proceeded to a simulation of the irregular extra-revenues with reference to all the Italian Hospital Centers and then to all the directly managed Hospitals. Specifically, we started from the "differentiation" of the extra-revenues mentioned above, respectively based on:

- a maximum compensation scheme of 30% (theoretical) for "by-function" activities, which obviously generates a minimum difference with respect to the values of the same "by-function" activities shown on the 2017 Income Statements, which is equal to EUR 802 million, including operating losses (see Table App. 4);
- and a minimum compensation scheme of 20% (theoretical) for "by-function" activities, which, on the contrary, generates a maximum difference compared to the values shown in the Income Statements, which is equal to EUR 1.440 million, including operating losses (see Table App. 6).

Thus, it is possible to reconstruct an overall estimate of the theoretical extra-revenues present in the public hospital system by proceeding as follows:

EUR 802-1,440 mil.

EUR 236-424 mil.

EUR 1,038-1,864 mil.

d) if the estimate, even in rough numbers, is then extended to the directly managed Hospitals that at present also include the 29 former Hospital Centers in Lombardy as well as the 2 in Friuli Venezia Giulia and Sardinia that have integrated activ-

EUR 1,038-1,864 mil.

e) at this point the total estimate of the extra-revenues of the entire public hospital system would be equal to

EUR 2,076-3,728 mil.

However, the estimate of the theoretical extra-revenues, calculated only as *surplus* compared to the theoretical calculation of 20% -30% could, according to the logic of the Ministerial Decree, be corrected upwards if we consider that:

- the 20% recognized for "by-function" activities on the basis of the provisions of the Ministerial Decree corresponds in reality to about 25% (i.e. on the items of revenues from health care services + copayment charges), and in this regard one side of the differentiation gap could reasonably be estimated as 20%;
- and the 30% recognized for "by-function" activities on the basis of the provisions of the Ministerial Decree corresponds to approximately 44% in reality (applied to revenues from health services + co-payment charges), and in this regard the second side of the differentiation gap could be reasonably estimated as 30%.

Naturally, all this would involve taking into account the augmentation of the operating losses or the surfacing of the latter in the event that the closure of the budgets of the Hospital Centers results balanced, but it would be necessary to proceed with an accurate examination of each Hospital Center.

The result of the estimates made so far is taken up and commented on in Section 4.2 of Part One.

Table App. 1—Comparison of 2017 total for revenues and costs of Hospital Centers as per the Income Statement (in thousands of euros)	on of 2013 to	2017 aata jor	revenues and	costs of rios,	puai Centers	as per me me	ome Statemen	t (in inousand	is of eurosy		4	,		٠	ŀ
Hospital Centers and University Hospital	dui	atient admissic	Impatient admissions and day-nospital admissions (1)	Spirai admiss	Suoi	revenues he	Keyenues from neattneare services and neattn-related social health services as per the IS (Cod. A0320) (2)	are services an s per the IS (C	od. A0320) (.	red social	specie	les from co- alist services	Kevenues from co-payment charges for external specialist services as per the IS (Cod. A0940)	irges for ext S (Cod. A09	40)
Centers	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 1	19,239	18,300	17,050	16,800	16,716	106,572	104,135	107,649	108,473	106,711	2,601	2,511	2,615	2,569	2,033
H.C. 2	29,200	28,200	32,590	28,500	32,807	181,948	183,365	190,873	193,471	196,411	6,534	006'9	6,564	5,598	5,567
H.C. 3	28,700	27,500	27,500	27,350	27,213	174,424	168,874	174,785	179,357	181,174	5,441	5,227	5,067	5,007	5,084
H.C. 4		25,100	25,600	25,550	25,430	153,780	149,070	154,878	162,387	165,300	3,336	3,142	3,297	3,273	3,250
H.C. 5	23,300	22,200	22,900	21,000	22,880	125,885	119,436	119,526	124,437	129,356	4,035	4,039	3,862	3,738	3,597
H.C. 6	100,070	84,150	95,050	94,800	94,326	540,499	529,186	542,128	540,077	537,733	14,648	15,181	13,454	12,178	12,072
Piedmont Total	226,509	205,450	220,690	214,000	219,372	1,283,108	1,254,066	1,289,839	1,308,202	1,316,685	36,595	37,000	34,859	32,363	31,603
H.C. 7 (8)	53,080	52,360	57,100	55,950	58,765	420,359	411,834	417,531	419,487	441,893	8,663	8,821	8,635	8,373	10,847
H.C. 8	51,500	21,960	59,260	64,535	64,212	394,620	401,961	429,078	443,432	458,691	6,541	6,800	6,974	7,510	9,804
Veneto total	104,580	104,320	116,360	120,485	122,977	814,979	813,795	846,609	862,919	900,584	15,204	15,621	15,609	15,883	20,651
H.C. 9	47,960	47,438	47,483	47,204	49,456	293,863	299,822	303,994	305,869	306,399	6,669	6889	6,739	6,794	6,431
H.C. 10	38,412	37,511	37,126	36,862	36,862	235,358	237,076	237,684	239,051	239,051	8,767	9,326	9,051	7,971	7,971
H.C. 11	33,698	32,574	32,198	31,680	41,500	206,473	205,873	206,136	205,278	324,698	3,138	3,152	3,255	3,849	5,366
H.C. 12	69,833	68,374	67,884	68,736	68,392	427,878	432,141	434,604	445,392	457,158	7,777	7,393	6,805	7,103	7,846
H.C. 13	32,497	32,104	31,809	31,289	31,133	199,118	202,904	203,645	202,749	208,151	6,094	6,129	6,085	6,043	5,703
E. Romagna Total (9)	222,400	218,001	216,500	215,771	227,343	1,362,690	1,377,816	1,386,063	1,398,339	1,535,457	32,445	32,889	31,935	31,760	33,317
North Italy Total	553,489	177,771	553,550	550,256	569,692	3,460,777	3,445,677	3,522,511	3,569,460	3,752,726	84,244	85,510	82,403	80,006	85,571
H.C. 14 (8)	26,792	26,611	25,237	24,678	24,555	151,700	144,679	141,250	145,348	160,829	3,286	3,186	3,364	3,607	3,729
H.C. 15	49,178	47,919	46,053	46,122	45,891	278,445	260,532	257,758	271,644	281,848	4,504	4,422	4,318	4,437	4,441
Marche Total	75,970	74,530	71,290	70,800	70,446	430,145	405,211	399,008	416,992	442,677	7,790	2,608	7,682	8,044	8,170
H.C. 16	49,610	47,922	38,706	34,599	38,592	241,829	238,751	232,965	224,195	224,616	6,418	6,222	5,336	4,743	4,119
H.C. 17	25,459	23,227	21,884	19,783	19,684	124,100	115,718	131,718	128,192	128,269	3,515	3,370	3,179	2,980	2,720
H.C. 18	65,373	61,261	52,344	48,843	48,599	318,664	305,205	315,050	316,490	324,679	11,307	10,950	10,188	10,386	10,060
H.C. 19	27,172	26,600	22,793	21,177	21,071	132,453	132,524	137,186	140,622	148,428	4,760	4,464	4,168	4,146	3,784
H.C. 20	34,586	35,489	31,272	29,767	24,001	168,593	176,806	188,218	192,885	199,476	6,009	5,580	5,572	5,213	4,528
Lazio Total	202,200	194,499	166,999	154,169	151,947	985,639	969,004	1,005,137	1,002,384	1,025,468	32,009	30,586	28,443	27,468	25,211
Central Italy Total	278,170	620,692	238,289	224,969	222,393	1,415,784	1,374,215	1,404,145	1,419,376	1,468,145	39,799	38,194	36,125	35,512	33,381
H.C. 21 (8)	74,633	70,926	659,99	66,300	62,969	299,652	305,360	317,373	298,153	282,993	5,989	5,708	5,675	4,569	4,899
H.C. 22	40,937	38,194	36,511	36,200	36,019	164,363	164,439	173,831	162,790	171,709	2,820	2,806	2,793	2,437	2,657
Apulia total	115,570	109,120	103,170	102,500	101,988	464,015	469,799	491,204	460,943	454,702	8,809	8,514	8,468	2,006	7,556
H.C. 23	28,168	26,527	26,083	28,213	28,072	98,057	97,212	96,652	117,375	118,268	2,042	2,054	1,849	2,036	1,945
H.C. 24 (8)	27,294	25,989	25,746	24,277	24,156	95,012	95,238	95,405	101,520	110,625	2,560	2,332	2,451	2,510	2,338
H.C. 25	10,305	9,830	698'6	9,855	9,806	35,871	36,024	42,958	46,927	58,102	1,778	1,610	1,560	1,508	1,564
H.C. 26	27,173	25,554	25,022	23,556	23,438	94,593	93,643	92,720	103,693	111,982	1,586	1,694	1,695	1,502	1,387
UC 37	05030	305.10	700,720	000,000	03,4/1	753,333	11,226	121 004	309,313	121.000	1,900	1 300	1 355	000,	1554
HC 28	34 120	22,12	175,02	32 213	32.052	155,727	102,011	163 486	177 138	176 703	2 430	2 3.03	7 333	7 335	1,333
H.C. 29	46.968	40.938	39.860	44.207	43.986	214.039	215.396	236,698	243.093	238.783	4.248	3.979	3.944	3.917	3.586
H.C. 30	19,918	16,538	15,211	16,918	16,833	892.06	87.012	90,324	93,034	90,269	1,322	1.231	1.237	1.161	995
H.C. 31	25,948	23,380	23,242	26,679	26,546	118,246	123,015	138,017	146,708	144,996	2,639	2,466	2,479	2,371	2,296
H.C. 32	34,593	29,411	27,965	27,188	27,052	157,644	154,744	190,991	174,053	174,303	2,033	1,985	1,873	1,744	1,838
H.C. 33	35,437	30,527	27,117	31,202	31,046	161,492	160,615	161,024	171,581	167,388	2,084	1,890	1,749	1,736	1,633
H.C. 34 (8)	26,636	23,048	23,775	30,272	30,150	121,383	121,264	141,180	166,466	155,068	1,884	1,806	1,754	1,715	1,722
Sicily Total	249,441	214,105	205,078	230,688	228,908	1,136,727	1,126,504	1,217,794	1,293,103	1,278,698	18,104	17,040	16,735	16,383	15,957
South Italy Total	457,951	411,125	394,968	419,089	416,367	1,924,275	1,918,420	2,036,733	2,123,561	2,132,377	34,879	33,244	32,758	30,945	30,747
Grand Total	1,289,610	1,207,925	1,186,807	1,194,314	1,208,452	6,800,836	6,738,312	6,963,389	7,112,397	7,353,248	158,922	156,948	151,286	146,463	149,699

2017 10,591,780 255,682 240,403 1,333,730 605,609 200,658 257,290 403,666 221,547 381,445 **602,992** 290,966 447,196 1,936,722 465,932 190,139 181,447 209,778 293,562 Fotal Revenues as per the IS (Cod. AZ999) 298,557 177,781 246,023 76,319 965.07 1,012,806 2,097,627 175,748 237,693 **1,341,105** 165,804 587,689 195,444 575,791 1,156,343 264,726 581,445 382,876 601,658 309,964 1,942,763 476,073 252,949 7**29,022** 54,550 198,845 10,466,543 580.552 386.033 291,340 1,844,462 176,762 440,938 404,849 249,091 168,219 585,160 194,076 261,182 558,028 **594,192** 330,098 452,353 224,930 1,349,959 1,944,151 501,282 188,765 170,224 391,492 188,143 291,229 1,799,828 552.840 217,830 376,362 166.877 251,845 238.366 57,952 2014 10,168,793 264,136 558,234 167,235 173,842 213,774 **1,345,285** 1,936,353 473,014 722,606 164,590 586,075 187,043 ,080,219 1,790,194 188,700 566.177 286,042 304,804 220,167 249,592 65,229 370,901 199 133 .994,842 (in thousands of euros) 8,473 63,887 152,756 63,643 18,561 **9,524** 15,399 94,166 190,761 580,220 26,430 84,642 6,952 17,958 6,100 8,324 116,733 497,207 696, 10,794 7,642 119.611 4,996 per the Income Statement Other revenues as per the IS 2016 48,284 93,751 20.947 123,827 508,149 110,709 9,588 8.629 2015 7,249 418,547 -6,708 15,140 12.199 11,907 21,445 20,208 17.360 5,969 8.886 2014 7,965 123,052 6,530 15,710 58,656 **23,416** 24,450 23,828 6,450 610,054 80,607 42,946 20,628 46,192 166,316 14,683 27,166 62,889 3,600 10,130 6,084 8.684 28.629 7.978 8.733 18.157 2013 costs of Hospital 120,010 107,626 227,636 63,663 16,244 81,444 38,947 160,021 49,027 364,301 160,050 1,134,449 2,746,991 340,197 238.054 39,120 88,831 Transfer revenues for "by-function" activities reported on the IS 59.323 45,929 97,560 46,153 39,120 314,637 94,570 198,112 1,191,267 22,888 67,685 (Cod. AA0030) 53,605 85,192 378,666 156,616 73,454 58,681 74,041 65,400 136,414 130,392 266,806 44,960 91,752 102,162 87,790 67,494 35,667 62,730 20,918 20,043 444 74,643 145,198 1,254,509 Comparison of 2013 to 2017 42,438 357,400 **606,148** 91,200 157,651 69,985 30,429 106,828 23,952 35,118 423,963 188,356 81,625 269,981 **228,495** 67,730 66,200 60,010 138,893 107,648 246,541 43,200 83,950 305,586 66,451 266,312 14,349 63.996 80.684 2014 94,209 97,171 191,380 63,996 230,748 63,525 61,744 62,321 37,884 366,810 33,897 228,743 73,269 129,717 60,354 21,463 19,436 31,207 **228,001** 357,718 160,843 239,622 84,427 67,476 14,849 71,728 1,205,422 33,939 56,448 78,809 2,598,981 64,002 Hospital Centers and University Hospital E. Romagna Total (9) Central Italy Total Total South Italy Total Piedmont Total Calabria Total North Italy Veneto total 4pu lia total H.C. 14 (8) Lazio Total H.C. 34 (8) H.C. 7 (8) Centers

2017 55,048 209,295 222,050 431,345 111,411 1,496,105 140.046 650.065 308,506 161,828 906,708 83.613 140,780 2016 4,571,875 169.137 139,162 760.993 100.746 621,604 881,905 307,463 2015 91,428 473,869 **984,343** 264,517 236,001 116,237 51,521 424,226 37.952 762,646 102.813 161,704 123,966 89,507 881,749 08,993 302,152 309,142 83,149 113,964 51.990 161,480 1,507,557 4,560,521 960 09 89,239 52,179 **630,660 265,490** 242,361 896,150 1,525,102 4,608,907 668,791 35,756 26,695 766.728 102.663 127,590 302,515 32,346 08,565 83.682 2013 34,251 62,902 115,490 17,409 7**3,341** 20,149 1,080,450 52 588 245,013 17.907 40,817 34,493 Costs for the Purchase of Non-Health Services as per the IS 22,406 33,014 193,294 26,114 **45,877** 35,671 28,705 16,056 72,561 63,866 38,961 27,073 27,696 15,451 1,043,853 44,684 6,988 309,569 54,561 (Cod. BA1570) (5) 83,454 15,726 71,086 106,661 23,162 65,115 32,777 21,345 16.890 1,070,445 41,604 7,150 26.611 46,543 27,667 258,904 56,000 69,925 130,500 44.653 47,859 995'69 33,210 34,869 211,045 71,404 30,713 47,169 207,504 23.028 24,831 28,036 7,248 60,575 2014 13,740 85,610 179,792 27,622 998'09 249,504 15,660 23,750 25,246 35,443 134,381 56,997 24,412 60,482 68,524 1,110,863 210,048 87.996 23.005 43,662 31,615 46,737 46,153 6,456 98,621 484,362 44,735 237,212 **546,800** 396,195 99,682 102,295 503,744 48,172 54,159 69,822 1,446,739 65,235 890,979 212,228 983,354 3,106,161 54,008 126,471 Costs for the Purchase of Goods as per the IS (Cod. BA010) 2017 164,324 97,605 41,988 54,159 439.617 58,368 45.850 77,454 464,849 643,867 226,319 50,062 69,769 120,650 74.060 69.107 Comparison of 2013 to 2017 data for 140,276 988'62 104,687 474,969 40,174 37,857 378,430 654,855 47,546 987,967 441.533 57.104 181.357 258,438 22,540 68.120 60,922 84,898 69,69 60,353 2015 108,958 163,551 86,638 38,729 170,228 62,116 106,257 44,904 2,683,030 54,593 64,774 80.174 90.865 50,863 60,468 230,486 22,286 39.966 56.307 886,698 2014 374,344 57,720 101,041 457,231 30,986 41,608 69,449 54,787 158,110 85,856 133,485 44,129 53,451 56,170 480,795 39,444 216,951 477,037 138,086 325,153 50,255 105,185 2,634,604 ,176,534 52,925 39,491 38,241 73.644 61,468 57,997 187,067 84,489 58,801 615,341 228,449 36.966 2013 (Continued) Table App. Hospital Centers and E. Romagna Total (9) University Hospital Central Italy Total Total South Italy Total Piedmont Total Calabria Total North Italy Veneto total 4pulia total H.C. 14 (8) Lazio Total H.C. 34 (8) H.C. 7(8) Centers

I – Comparison of 2013 to 2017 data for revenues and costs of Hospital Centers as per the Income Statement (in thousands of euros) 2017 344,217 75,464 466,258 65,353 1,982,781 Other costs as per the IS 37,064 77,907 **360,269** 326,696 125,606 440,666 20,363 29.951 60,643 62,444 76,387 19,09 2015 35,163 124,487 33,965 82,692 **363,815** 23,111 204,449 372,916 98,716 23,941 58,639 82,580 87,508 83,627 12,275 18,438 28,389 19,480 27,185 1,786,335 345,947 446,395 20,590 27,644 31,425 23,445 197,833 354,987 80,348 386,470 470,467 54,728 72,214 55,392 83,997 139,328 **49,793** 24,793 17,471 1,762,608 55,961 56,563 356,610 18,414 409,585 61,801 24,545 860 95 2013 34,965 17,336 15,980 9,246 12,488 8,176 6,401 **52,291** 69,627 14,856 263,785 7.934 9,402 6,004 1.903 7,801 2017 1,301 1,958 15,124 20,004 10,407 18,045 16,580 7,483 10,640 **81,974** 100,019 10,806 849 6,073 4,935 8,415 3,099 6,852 2.545 Provisions as per the IS (Cod. BA2690) 7,694 5,346 7,494 600'6 **16,503** 7,486 17,863 37,404 6,462 9,830 79,045 95,548 2,014 068'9 8,994 1,906 1,486 5.180 433 36,580 4,876 2,295 17,167 113,564 282,425 10.026 2015 101,024 679 13,853 **16,218** 2,622 19,335 46,443 6,720 7,109 **81,689** 296,519 645 18,020 4,741 22,761 10,544 19,893 593 40,997 7.983 1,720 2,657 1,740 15,198 27,130 32,565 11,254 17,364 9,610 6,114 3,226 2,841 **66,969** 84,333 3,249 3,270 11,367 6,201 12,269 3,546 21,015 3.289 2,329 6,338 12,067 251,395 6,110 3,154 8.374 80,790 2013 (Continued) Table App. E. Romagna Total (9) Hospital Centers and University Hospital Central Italy Total North Italy Total South Italy Total Calabria Total H.C. 27 Piedmont Total Veneto total 4pu lia total H.C. 14 (8) Lazio Total 4.C. 21 (8) H.C. 34 (8) H.C. 7 (8) Centers H.C. 28

1 – Comparison of 2013 to 2017 data for revenues and costs of Hospital Centers as per the Income Statement (in thousands of euros) -18,273 -384,889 -34,989 -438,151 2017 -17,468 41,794 -10,491 919'09--557,180 -6,428 -11040 -10,491468,605 42,000 -42.000 Operating results as per the IS -54,282 2,680 -4,486 -6,568 -15,081 -52,715 -17,047 1,000 -62,567 -28,102 -79,704 -618,388 2.680 -18,864-68,762 -161,799 -98.853 -92,543 1,880 -29,858 2015 -53,708 -73,601 **462,842** -8,432 -30,648 -73,435 -5.619 -22,835 -36,286 -158,632 -102,291 -74,610 6.007 -14,562 -36,257 -608,820 -12,750 -**18,740** -24,950 -5**0,559** -102,291 -55,349 -477,781 0 -568,862 -5,990 -91,594 -15,516 -25.609-69.299 2013 261,043 **2,278,886** 462,665 **635,481** 193,094 10,955,386 538,948 3,398,080 1.960.581 231,608 174.668 2017 10,427,128 10,701,128 10,781,518 571,052 220,069 267,880 **1,727,663** 258,437 571,980 1,795,008 215,396 574.960 430,868 Total costs as per the IS **583,618** 443,158 227,193 277,093 **1,738,374 595,240** 187,996 231,784 188,876 168,647 2,321,992 292,053 579.983 1.795.703 212,188 371,430 257,867 533,063 245,368 79,187 158.530 238.693 226,582 222,382 577,842 466,384 526,961 282,448 160,896 **580,786** 183,569 3,260,524 514,546 1,075,845 1,749,336 212,358 2,315,591 162,094 370,686 279,484 365,484 236,438 719,909 73,878 226,613 561,299 201.629 171,049 989,348 2,024,581 2,315,795 474,405 573,194 467,505 271,852 72,842 157,663 **576,461** 179,604 167,812 176,970 273,078 255,401 544,381 710,300 181,445 10,368,377 367,439 275,916 1,740,295 360,241 242,129 235,895 227,387 126.698 (Continued) Table App. Hospital Centers and E. Romagna Total (9) University Hospital Central Italy Total North Italy Total South Italy Total Piedmont Total Calabria Total Veneto total 4pu lia total H.C. 14 (8) Lazio Total H.C. 34 (8) H.C. 7 (8) Centers H.C. 28

Notes

- The number of in-hospital stays was noted in the Management Report attached to the approved and published Financial Statements.
- The values shown represent the difference between the total revenues and revenues from health services + revenues from co-payment charges + revenues for Includes revenues from hospitalization in the strict sense, but also from specialist visits, File F, etc.
 - "by-function" activities.
- These include pharmaceutical products, blood derivatives, blood, reagents, X-ray plates, chemicals, food products, stationery, fuel, etc.
 - (5) These include the costs for meal services, laundry, cleaning, etc.(6) This is the difference between total costs and costs for the purch
- This is the difference between total costs and costs for the purchase of goods + costs for non-health care services + costs for personnel + costs for provisions. It also includes the costs for health services that are not always clearly identifiable in the financial statements, though it does not include financial charges.
 - (7) This is reported as a final result on the Income Statement.
- In some cases there are "Other Revenues" with a negative sign: this is the result of corrective items introduced when preparing the Financial Statements (e.g.: gradual repayment of advances for machinery purchases, etc. by the Region). 8 6
- a special unified management was enacted (a Polyclinic is more than a normal hospital), in which, however, the staff remained employed by the AUSL: hence the upward shift in hospitalizations and consequent health care and social-health revenues as well as revenues from co-payment charges and "by-function" In an Emilia Romagna Hospital Center (H.C. 10) the 2017 values were estimated for both revenues and costs, assuming a scenario of total continuity with respect to the previous year, because this Hospital Center, as of June 30, 2017 was merged into an AUSL. While in another Emilia Romagna Hospital Center (H.C. 11) activities, and other Revenues as well as Cost items.
 - Final Balance Reports of the individual Hospital Centers and University Hospital Centers for the years indicated. Source: survey by Ermeneia - Studi & Strategie di Sistema, 2018

Transfer revenues for "by-function" activities reported on the IS (Cod. AA0030) 2017 99.3 95.9 6.98 8.86 102.1 96.5 94.4 116.9 6.501 144.8 0.96 104.0 0.56 104.1 88.8 93.8 97.4 94.1 2014 116.8 99.4 8.66 100.0100.0 100.0 100.0 100.0 2017 98.6 104.9 64.2 6.00 89.1 6.06 8.87 83.9 81.8 8.06 0.96 4.4 88.2 Revenues from co-payment charges for external specialist services as per the IS 95.2 .90 90.4 104.5 99.2 97.9 98.5 103.3 73.9 8.98 89.2 76.3 86.4 8.68 95.0 84.8 85.8 94.9 95.9 88.4 122.7 3.601 79.5 88.7 7.66 102.4 100.5 100.5 93.1 103.2 8.86 103.7 9.86 6.88 8.06 94.8 106.9 93.9 6.66 98.4 87.8 656 90.4 93.6 83.1 90.5 94.8 0.96 7.66 96.1 .06 2013 = 100.0) (°) 106.4 96.5 4.00 101.5 9.0016.96 626 95.6 0.96 95.3 93.4 100 6 95.1 98.2 96.7 95.3 100.0 100.0 0.001 0.001 100.0 100.0 100.0 0.00 0.001 0.00 100.0 100.0 100.0 100.0 0.001 100.0 0.001 0.001 100.0 0.001 100 Revenues from healthcare services and health-related social health services as per the IS 2017 99.5 106.0 9.101 103.4 104.0 106.8 104.5 108.4 103.7 94.4 162.0 100.1 92.9 98.0 99.5 110.4 8.86 8.66 9.101 99.4 8.101 6.96 101.7 100.3 99.5 9.601 103.1 92.7 <u>2</u> 99.3 16 (Cod. A0320) (2) 103.4 101.0 99.8 101.6 102.3 101.7 101.8 102.0 105.9 104.9 100.2 100.7 108.7 105.9 107.1 94.9 100.3 100.5 99.3 92.6 96.3 6.86 99.2 98.6 02.9 106.1 104.0 96.8 96.9 6.101 101.0 95.4 104.9 100.0 100.6 100.7 101.2 6.66 9.66 98.3 93.6 94.2 93.2 95.8 100.1 99.0 9.66 99.7 97.1 96.3 99.7 99.1 0.00 0.0 0.00 0.00 0.00 0.001 0.00 0.00 0.00 0.001 0.00 0.001 0.001 0.00 0.00 0.00 0.001 0.00 0.001 0.001 0.00 0.001 0.00 000 2017 123.2 6.98 94.8 97.8 0.96 95.8 102.2 102.9 88.4 88.0 98.2 93.3 8.77 74.3 77.5 69.4 662 102.3 6.06 77.3 75.1 88.2 99.7 86.3 84.5 Impatient admissions and day-hospital admissions Table App. 2 – Comparison of 2013 to 2017 data for revenues and 102.8 94.5 97.6 95.3 98.3 0.96 74.7 80.9 88.8 88.4 94.1 84.9 94.0 98.4 96.3 99.4 93.8 93.2 69.7 91.5 90.1 88.7 100 92.4 85.3 86.7 2015 1000 0.98 82.6 9.68 9.88 90.4 89.3 96.7 80.1 86.2 95.4 9.96 96.2 96.5 986 8.66 99.3 7.96 94.4 868 7.96 94.2 90.1 100.0 0.001 0.001 0.001 100.0 0.001 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0.001 100.0 100.0 100.0 0.001 100.0 100.0 0.001 0.001 100.0 100.0 Hospital Centers and University Hospital Centers (1) ota North Italy Total South Italy Total Calabria Total entral Italy Marche Total Veneto total H.C. 14 (8) Lazio Total 4 pulia tota Sicily Total

(Continued) Table App. 2 - Comparison of 2013 to 2017 data for revenues and costs of Hospital Centers as per the Income Statement (I.N. 2013 = 100.0) (*)	2-Comp	arison of	2013 to 2	01 / aara	tor revenu	es ana cr	200 07 1100	Title Co.	2000	HIC THEOL	The District	C/10 (4.1)		/ / / /						ľ
Hospital Centers and University		Other rev	Other revenues as per the IS (3)	er the IS		Total	Revenues ;	s per the	Total Revenues as per the IS (Cod. AZ999)	(Z999)	Costs fo	Costs for the Purchase of Goods as per the IS (Cod. BA010) (4)	urchase of Good (Cod. BA010) (4)	oods as pe (4)	r the IS	Costs for	Costs for the Purchase of Non-Health Services as per the IS (Cod. BA1570) (5)	hase of No S (Cod. B.	n-Health S A1570) (5)	ervices
Hospital Centers (1)	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017		2014	2015	2016	2017
H.C. 1	100.0	115.6	139.6	153.7	189.3	0.001	8.56	101.3	1.901	107.4	100.0	99.1	110.8	119.1	123.4	100.0	117.0	99.4	98.5	93.2
H.C. 2	100.0	101.6	140.6	134.0	471.0	100.0	101.6	108.9	115.2	121.3	100.0	105.4	120.5	123.8	127.8	100.0	111.5	116.2	117.2	121.5
H.C. 3	100.0	88.1	112.7	93.8	91.8	100.0	97.3	101.0	104.2	105.5	100.0	99.2	105.0	110.5	112.3	100.0	101.1	103.5	109.7	119.0
H.C. 4	100.0	100.7	117.3	112.2	101.9	100.0	6.96	102.5	9.801	110.8	100.0	95.1	100.9	113.0	116.6	100.0	106.7	102.7	6.101	104.7
H.C. 5	100.0	39.6	8.69	70.0	111.0	100.0	96.3	97.5	105.6	6.901	100.0	95.8	102.5	9.901	113.4	100.0	120.8	120.8	122.0	126.6
H.C. 6	100.0	91.1	117.8	117.7	79.3	100.0	97.3	101.0	101.4	9.001	100.0	8.96	106.3	105.9	109.3	100.0	94.4	91.6	88.2	83.4
Piedmont Total	100.0	90.8	117.8	116.4	124.1	100.0	97.6	101.9	105.0	106.0	100.0	98.1	107.5	110.9	114.6	100.0	102.5	100.4	99.7	99.5
H.C. 7 (8)	100.0	-15.6	41.8	-27.6	75.7	100.0	9.76	102.5	102.7	6.901	100.0	96.3	109.1	107.1	112.3	100.0	7.86	98.3	6.88	85.7
H.C. 8	100.0	8.69	59.5	114.3	1.861	0.001	102.6	112.0	114.8	118.1	100.0	105.1	126.3	124.8	134.8	0.001	8.56	92.9	87.5	86.1
Veneto total	100.0	7.3	46.6	10.4	108.5	100.0	100.0	107.0	108.5	112.2	100.0	100.0	116.4	114.6	121.8	100.0	I'./6	95.4	88.1	85.9
H.C. 9	100.0	42.6	59.9	55.2	8.64	100.0	101.2	102.4	102.8	103.5	100.0	107.5	103.5	111.0	118.0	100.0	102.3	8.86	89.2	88.1
H.C. 10	100.0	149.2	112.0	155.6	155.6	100.0	101.8	101.9	104.4	104.4	100.0	101.2	101.7	107.8	107.8	100.0	97.1	6.88	92.5	92.5
H.C. 11	100.0	43.4	50.3	54.8	0.06	100.0	6.86	100.2	8.001	156.1	100.0	103.7	110.9	114.2	192.9	100.0	102.9	6.66	87.2	185.3
H.C. 12	100.0	62.8	104.5	64.3	63.0	100.0	100.0	104.2	103.9	107.1	100.0	105.7	136.6	128.6	139.1	100.0	93.0	9.68	0.101	101.2
H.C. 13	100.0	34.1	41.3	45.1	42.0	100.0	101.0	105.3	8.101	102.0	100.0	102.8	118.5	113.6	118.7	100.0	6.001	9.66	92.6	87.3
E.R. Total (9)	100.0	50.2	9.99	58.7	9.09	100.0	100.5	103.0	102.9	112.3	100.0	104.8	117.9	117.4	134.6	100.0	8.86	95.2	94.0	106.5
North Italy Total	100.0	57.3	81.3	71.0	I.16	100.0	99.2	103.4	105.0	9.601	100.0	100.8	113.3	114.0	123.0	100.0	9.66	97.0	94.4	8.86
H.C. 14 (8)	100.0	40.2	131.0	2.0	-45.0	100.0	6.86	99.4	9'001	105.3	100.0	103.2	107.9	110.3	123.3	100.0	2.96	97.2	94.1	102.5
H.C. 15	100.0	137.6	126.9	73.5	91.6	100.0	101.5	103.2	102.8	104.8	100.0	103.6	116.7	114.7	120.2	100.0	101.7	95.7	96.1	91.4
Marche Total	100.0	101.3	128.4	46.8	40.7	100.0	100.5	101.8	102.0	105.0	100.0	103.4	113.8	113.2	121.2	100.0	99.2	96.5	95.1	6.96
H.C. 16	100.0	61.9	73.9	64.9	63.0	100.0	99.1	93.1	87.4	88.0	100.0	100.9	6.86	95.2	87.1	100.0	98.3	90.1	77.3	74.7
H.C. 17	100.0	92.6	115.4	160.7	92.6	100.0	8.66	105.7	106.3	97.3	100.0	98.1	110.6	116.1	122.0	100.0	101.5	108.7	103.9	102.0
H.C. 18	100.0	92.2	95.7	120.5	76.5	100.0	6.86	96.4	8.76	6.3	100.0	98.3	104.8	102.5	109.6	100.0	114.3	107.0	115.3	126.9
H.C. 19	100.0	85.9	83.5	81.3	118.4	100.0	101.1	101.1	102.0	110.0	100.0	107.6	104.6	107.8	126.4	100.0	106.5	105.7	82.4	77.5
H.C. 20	100.0	93.2	124.1	104.5	112.7	100.0	105.2	111.2	112.5	117.8	100.0	105.2	103.6	9.96	97.6	100.0	98.4	92.5	93.1	9.96
Lazio Total	100.0	84.4	94.1	106.2	85.0	100.0	100.3	99.7	99.I	9.66	100.0	101.5	103.9	101.7	105.9	100.0	104.9	100.6	96.0	98.5
Central Italy Total	100.0	87.6	100.6	94.9	76.5	100.0	100.4	100.3	100.0	101.2	100.0	102.0	106.4	104.6	109.9	100.0	103.8	8.66	95.9	98.2
H.C. 21 (8)	100.0	28.5	-55.0	122.0	365.9	100.0	106.0	100.6	98.5	8.66	100.0	97.4	112.6	97.4	84.3	100.0	92.6	92.2	88.9	93.7
H.C. 22	100.0	82.6	79.8	212.3	204.9	100.0	100.9	101.3	98.6	104.1	100.0	108.5	114.4	102.7	111.5	100.0	100.9	9.001	94.9	102.1
Apulia total	100.0	47.7	-7.1	154.1	308.7	100.0	104.2	100.9	98.5	101.2	100.0	100.9	113.1	99.1	92.9	100.0	95.2	94.8	8.06	96.3
H.C. 23	100.0	220.5	189.3	172.0	170.0	100.0	100.9	102.1	7.101	105.1	100.0	7.76	105.1	8.601	115.9	100.0	101.8	103.8	108.2	107.5
H.C. 24 (8)	100.0	155.0	292.9	146.7	130.6	100.0	9.001	104.2	9.66	95.8	100.0	93.8	108.5	104.4	109.7	100.0	101.4	102.4	103.2	97.1
H.C. 25	100.0	46.9	5.5	39.2	34.6	0.001	88.8	85.0	0./11	1.671	100.0	1001	96.4	99.0	139.1	100.0	112.3	110.7	108.2	6.771
Calabaia Total	100.0	201.3	0./07	03.4	6.001	1000	7.701	100.7	102.0	106.0	100.0	100.1	105.1	107.4	121.0	1000	0.001	102.0	105.0	0.511
HC 27	100.0	9 261	91.7	173.2	134.8	100.0	102.8	103.6	106.3	105.7	100.0	101.8	107.7	113.4	122.4	100.0	103.5	103.0	103.0	97.2
H.C. 28	100.0	48.0	99.4	31.5	116.6	100.0	100.0	104.5	107.9	110.7	100.0	105.3	127.4	129.3	133.6	100.0	94.3	91.2	0.68	2.96
H.C. 29	100.0	119.3	70.0	53.6	60.3	100.0	102.4	105.9	9.501	101.2	100.0	104.5	124.9	125.3	124.0	100.0	84.8	79.7	82.9	85.0
H.C. 30	100.0	107.4	8.07	147.9	226.0	100.0	6.111	103.9	102.7	95.5	100.0	105.8	114.1	116.2	123.7	100.0	5.06	82.2	84.6	88.5
H.C. 31	100.0	78.2	54.3	95.7	59.5	100.0	9.101	107.4	113.3	114.9	100.0	105.7	141.6	139.1	152.0	100.0	0.98	77.2	79.4	92.8
H.C. 32	100.0	38.6	29.7	61.6	133.7	100.0	101.1	101.3	100.9	103.5	100.0	105.9	116.8	113.0	123.3	100.0	97.2	95.3	98.1	97.1
H.C. 33	100.0	83.3	89.4	158.2	168.3	100.0	104.8	104.6	107.8	101.5	100.0	103.6	102.1	109.9	106.0	100.0	86.4	81.8	2.99	63.2
H.C. 34 (8)	100.0	-29.8	-18.2	59.9	49.7	100.0	8.901	117.1	128.4	121.7	100.0	111.9	149.2	156.7	141.7	100.0	90.4	9.001	6.901	7.76
Sicily Total	100.0	75.7	59.8	91.1	109.7	100.0	103.6	105.7	108.4	106.0	100.0	105.5	122.6	124.8	126.5	100.0	91.0	87.6	87.0	88.2
South Italy Total	100.0	80.0	72.9	96.1	121.6	0.001	103.1	103.7	105.3	104.9	100.0	103.2	117.2	115.1	116.7	100.0	94.8	92.8	87.6	94.1
Grand Total	100.0	68.6	83.3	81.5	95.1	100.0	100.7	102.9	104.2	106.5	100.0	101.8	112.9	112.2	117.9	100.0	1.66	96.4	94.0	97.3

2017 100.0 100.9 101.3 101.1 98.5 99.1 108.8 Fotal costs 100.8 06.5 100.3 9.66 8.46 100.0 99.9 101.5 99.5 100.3 99.7 8.00.8 99.8 9.76 0.86 0.001 0.001 0.001 0.001 0.001 0.001 100.0 0.001 0.00 0.001 100.0 100.0 100.0 0.001 0.001 0.00 0.001 103.6 2017 104.5 120.1 115.9 84.8 80.4 56.2 88.1 ment (I.N. 2013 = 100.0) (°) Other costs as per the IS
(6) 114.0 104.2 108.2 104.2 88.4 106.2 85.4 90.5 1.682015 101.3 100.0 103.8 104.8 101.1 86.3 1003 83.0 120.2 95.7 96.1 88.3 103.3 **98.3** 104.8 100.9 94.1 94.5 94.7 89.3 99.3 costs of Hospital Centers as per the Income State 2013 100.0 100.0 100.0 0.001 100.0 0001 0.00 0.001 100.0 0.00 0.00 0.00 2017 99.3 190.4 123.1 319.6 146.9 260.8 144.2 149.5 109.0 166.3 158.0 127.6 106.6 164.2 9.501 Provisions as per the IS (Cod. BA2690) 99.5 73.7 60.8 90.3 56.8 246 2015 80.5 80.1 9.09 6.001 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0.001 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0.001 100.0 100.0 100.0 100.0 100.0 0.001 0.001 100.6 104.0 98.7 100.5 97.7 100.4 100.2 101.5 93.5 101.4 100.0 97.6 94.5 103.9 6.96 103.3 I.6696.2 98.2 9.66 for data Personnel costs as per the IS (Cod. BA2080) 101.6 101.2 102.8 101.1 84.8 6.86 99.4 99.2 6.96 0.66 Comparison of 2013 to 2017 I.6696.2 2015 100.4 98.7 101.4 9.501 97.3 96.2 100.0 97.9 100.5 101.1 99.3 99.9 98.1 **98.0** 96.4 9.86 98.4 101.3 6.96 96.5 96.3 98.3 100.7 99.4 0.66 99.7 9.66 101.0 98.1 2014 101.0 100.2 100.0 98.9 98.6 0.001 9.66 9.96 98.4 99.6 100.4 **99.9** 98.1 99.8 99.0 100.3 99.5 99.5 99.3 98.0 98.8 1.001 99.3 **99.6** 97.4 8.86 99.0 98.4 97.4 100 98.7 98.3 100.0 100.0 100.0 100.0 2013 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0.001 100.0 100.0 Central Italy Total 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0.00 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Hospital Centers and University Hospital Centers North Italy Total Continued) Table South Italy Total Piedmont Total Calabria Total E.R. Total (9) Veneto total H.C. 34 (8) Sicily Total Apulia total H.C. 14 (8) Lazio Total

- The Notes referred to in Table App. 1 are also shown in this Table relating to the Index Numbers.
- The number of in-hospital stays was noted in the Management Report attached to the approved and published Financial Statements.
 - Includes revenues from hospitalization in the strict sense, but also from specialist visits, File F, etc.
- The values shown represent the difference between the total revenues and revenues from health services + revenues from co-payment charges + revenues for "by-function" activities.
 - These include pharmaceutical products, blood derivatives, blood, reagents, X-ray plates, chemicals, food products, stationery, fuel, etc.
 - (4) These include pharmaceutical products, blood derivatives, blood, re(5) These include the costs for meal services, laundry, cleaning, etc.

9

- This is the difference between total costs and costs for the purchase of goods + costs for non-health care services + costs for personnel + costs for provisions. It also includes the costs for health services that are not always clearly identifiable in the financial statements, though it does not include financial charges.
- (7) This is reported as a final result on the Income Statement.
- In some cases there are "Other Revenues" with a negative sign: this is the result of corrective items introduced when preparing the Financial Statements (e.g.: gradual repayment of advances for machinery purchases, etc. by the Region). 8
- a special unified management was enacted (a Polyclinic is more than a normal hospital), in which, however, the staff remained employed by the AUSL: hence the upward shift in hospitalizations and consequent health care and social-health revenues as well as revenues from co-payment charges and "by-function" In an Emilia Romagna Hospital Center (H.C. 10) the 2017 values were estimated for both revenues and costs, assuming a scenario of total continuity with respect to the previous year, because this Hospital Center, as of June 30, 2017 was merged into an AUSL. While in another Emilia Romagna Hospital Center (H.C. 11) activities, and other Revenues as well as Cost items.
- Processing of the Income Statement data of the individual Hospital Centers and University Hospital Centers, shown in Table App. 1. *) Final Balance Reports of the individual Hospital Centers and University Hospital Centers for the years indicated. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

illers in the state of the stat	2013 69.4 69.2	,00	ar and an east too many many many						external specialist services as per the IS (Coc.						
art Total (S)	2013 69.4 69.2	3	(Cod. A0320) (2)	2)	-	CALCI III.	,	A0940)		. Cour.		I.S. (I.S. (Cod. AA0030)	30)	
Trotal	69.4	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
nt Total (8)	69.2	70.8	69.2	66.2	64.7	1.7	1.7	1.7	1.6	1.2	23.9	21.5	22.2	25.0	25.2
nt Total (8)		9.89	2.99	63.8	9.19	2.5	2.6	2.3	1.8	1.7	24.3	24.8	25.9	29.6	21.1
ar Total	73.9	73.5	73.3	72.9	72.7	2.3	2.3	2.1	2.0	2.0	20.3	21.1	20.7	21.9	22.2
nr Total (8)	6/.5	97.9	66.4	65.6	65.5	5.1	4.4	4. 6	5.1	5.1	27.4	7.1.7	28.0	29.3	29.9
nt Total (8)	71.8	70.7	6.69	67.2	0.69	2.3	2.4	2.3	2.0	1.9	21.6	25.1	24.8	27.9	24.6
	53.9	54.3	53.5	53.1	53.3	1.5	1.6	1.3	1.2	1.2	36.6	36.6	35.8	36.3	39.1
Prof.	62.3	62.4	61.5	60.5	60.4	1.8	1.8	1.7	1.5	1.4	29.9	30.2	29.9	31.4	31.2
H.C. 8	74.2	74.5	71.9	72.1	73.0	1.5	1.6	1.5	1.4	1.8	9.91	25.1	23.5	28.5	19.8
17 4 4	8.9/	76.2	74.5	75.1	75.5	1.3	1.3	1.2	1.3	1.6	18.9	20.4	22.6	20.5	17.7
Veneto total	75.4	75.3	73.2	73.7	74.3	1.4	1.4	1.3	1.4	1.7	17.7	22.8	23.1	24.5	8.8I
H.C. 9	78.0	9.87	78.7	78.9	78.5	1.8	1.8	1.7	1.8	1.6	12.7	16.4	15.1	15.2	16.2
	82.3	81.4	91.6	80.1	80.1	3.1	3.2	3.1	2.7	2.7	11.9	11.3	12.2	13.1	13.1
	78.2	78.8	6.77	77.1	78.8	1.2	1.2	1.2	1.4	1.3	12.8	16.5	17.0	17.2	15.4
H.C. 12	9.9/	77.4	74.7	8.97	76.5	1.4	1.3	1.2	1.2	1.3	13.7	16.0	15.8	8.91	17.3
H.C. 13	65.3	62.9	63.5	65.4	0.79	2.0	2.0	1.9	1.9	1.8	12.0	25.1	26.6	23.5	22.7
E.R. Total (9)	1.92	9.92	75.1	75.9	76.4	1.8	1.8	1.7	1.7	1.7	12.8	17.0	17.1	17.1	16.9
North Italy Total	70.2	70.5	1.69	0.69	69.4	1.7	1.7	9.1	1.5	9.1	21.0	23.7	23.7	24.7	23.I
	6.89	66.4	64.6	9:29	69.4	1.5	1.5	1.5	1.6	1.6	25.6	30.5	28.7	32.7	30.7
	75.1	69.2	67.3	71.2	72.5	1.2	1.2	1.1	1.2	1.1	19.8	24.2	26.7	24.8	22.9
Marche Total	72.8	68.2	66.3	69.2	71.4	1.3	1.3	1.3	1.3	1.3	21.9	26.5	27.4	27.7	25.8
	72.6	72.3	75.2	77.1	9.92	1.9	1.9	1.7	1.6	1.4	18.1	21.2	17.3	15.9	16.7
H.C. 17	74.2	69.3	74.5	72.1	78.8	2.1	2.0	1.8	1.7	1.7	12.8	18.2	11.8	8.6	10.0
	2.69	67.5	71.4	70.8	73.7	2.5	2.4	2.3	2.3	2.3	20.9	23.6	19.3	18.3	18.5
	76.2	75.4	78.1	79.3	9.77	2.7	2.5	2.4	2.3	2.0	11.2	13.6	11.4	10.5	9.7
	78.9	9.82	79.2	80.2	79.2	2.8	2.5	2.3	2.2	1.8	14.6	15.6	14.3	14.1	15.5
	73.3	71.8	74.9	75.2	26.6	2.4	2.3	2.1	2.1	1.9	16.9	19.7	15.9	14.9	15.2
ly Total	73.1	70.7	72.3	73.3	74.9	2.1	2.0	1.9	1.8	1.7	18.5	21.8	19.5	18.9	18.6
H.C. 21 (8)	63.3	6.09	2.99	64.0	0.09	1.3	1.1	1.2	1.0	1.0	34.0	37.6	32.9	33.3	33.9
	62.9	65.3	68.7	66.2	1.99	1.1	1.1	1.1	1.0	1.0	31.6	32.4	29.0	29.7	30.0
	64.2	62.4	67.4	64.7	62.2	1.2	1.1	1.2	1.0	1.0	33.2	35.8	31.6	32.1	32.5
	52.4	51.5	9.09	61.7	60.1	1.1	1.1	1.0	1.1	1.0	45.1	44.5	45.9	34.9	36.7
H.C. 24 (8)	56.1	55.9	54.1	60.2	68.3	1.5	1.4	1.4	1.5	1.4	39.9	38.9	37.6	34.7	26.9
	55.0	62.2	78.7	61.5	0.69	2.7	2.8	2.9	2.0	1.9	22.8	24.8	0.8	30.0	20.9
Calabria Total	55.7	55.0	55.8	00.0	0.70	1.0	1.0	1.3	6.0	0.0	30.7	30.0	35.4	34.5	33.2
	603	58.4	61.0	603	2.59	80	2.0	2.0	7.0	80	33.7	34.0	34.5	33.7	20.4
	65.2	63.4	929	8.89	0.79	1.0	1.0	6.0	6.0	6.0	30.1	33.8	30.0	29.2	28.3
H.C. 29	56.0	55.0	58.5	60.2	61.7	1.1	1.0	1.0	1.0	6.0	35.8	35.7	35.9	35.2	33.1
H.C. 30	51.4	44.0	49.2	51.3	53.5	0.7	9.0	0.7	9.0	9.0	45.0	52.6	48.1	43.9	39.0
	63.9	65.4	69.4	6.69	68.2	1.4	1.3	1.2	1.1	1.1	31.2	30.6	27.6	26.0	29.0
	54.2	52.6	56.4	59.3	57.9	0.7	0.7	9.0	9.0	9.0	40.3	44.8	41.6	37.2	35.2
	48.4	45.9	46.1	47.7	49.4	9.0	0.5	0.5	0.5	0.5	44.0	48.0	47.4	41.5	38.5
	0.19	57.0	9.09	65.1	64.0	6.0	8.0	8.0	0.7	0.7	31.0	44.1	39.8	30.9	32.4
	57.0	54.5	57.8	59.8	60.5	6.0	0.8	9.8	0.8	0.8	36.8	40.8	38.5	35.0	33.3
lotal	58.2	56.4	59.5	0.19	61.5	1.1	I.0	1.0	6.0	0.9	36.5	39.4	36.6	34.2	32.7
Grand Total	699	65.8	66.5	67.2	67.9	1.6	1.5	1.4	1.4	1.4	25.6	28.6	27.2	26.8	25.4

Cost for the Purchase of Non-Health Services (Cod. BA1570) 2017 2015 10.8 2014 10.8 8.8 10.4 10.8 8.01 13.4 2013 1.4 Cost for the Purchase of Goods (Cod. BA010) 20.8 18.1 **30.5** 19.0 28.3 36.4 **26.9** 2016 26.1 30.2 and costs of Hospital Centers as per the Income Statement (Comp. %) (°) 22.7 24.6 26.9 33.1 34.0 2015 **30.8** 19.2 16.9 100.0 1000 Total Revenues as per the IS (Cod. AZ999) 0.001 0.001 0.001 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 2014 100.0 0.00 100.0 0.00 0.00 0.00 0.001 100.0 0.00 0.00 100.0 100.0 100.0 2013 100.0 100.0 100.0 0.001 100.0 100.0 0.001 100.0 100.0 100.0 100.0 0.00 0.001 100.0 0.001 100.0 100.0 100.0 0.001 100.0 0.001 6.3 7.0 5.4 4.8 3.6 Comparison of 2013 to 2017 data for Other revenues as per the IS 4.8 16.4 0.9 6.4 2015 6.9 10.4 2014 6.1 8.0 0.9 8.3 50.6 4.0 4.0 6.01 6.4 Central Italy Total Hospital Centers and University Hospital Centers North Italy Total Continued) Table South Italy Total Piedmont Total Calabria Total E.R. Total (9) Veneto total Apulia total H.C. 14 (8) Lazio Total

		Personnel	costs (Co	Personnel costs (Cod. BA2080)			Provision	Provisions (Cod. BA2690)	A2690)			0	Other costs				Ţ	Fotal costs		
Hospital Centers (1)	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
H.C. 1	44.7	45.0	44.0	43.0	41.7	1.5	0.2	0.2	0.3	1.5	16.1	16.3	15.5	14.8	14.5	100.0	100.0	100.0	100.0	100.0
H.C. 2	47.3	45.9	44.6	44.0	41.6	1.4	0.2	0.7	0.1	1.3	19.1	20.5	20.1	21.2	23.9	100.0	100.0	100.0	100.0	100.0
H.C. 3	51.4	51.6	51.3	50.0	49.1	8.0	0.1	0.1	9.4	0.7	12.2	12.7	11.7	11.7	11.8	100.0	100.0	100.0	100.0	100.0
H.C. 4	49.6	48.9	48.4	47.8	47.6	1.2	0.3	9.0	0.5	0.5	14.2	16.3	6.91	15.6	14.8	100.0	100.0	100.0	100.0	100.0
H.C. 5	54.2	53.9	51.7	51.1	49.9	1.0	9.4	1.2	1.1	8.0	13.7	13.6	14.9	14.9	15.3	100.0	100.0	100.0	100.0	100.0
H.C. 6	4.79	48.2	4/./	4/.1	40./	1.5	1.4	7.1	C.I	0.7	70.0	20.8	20.1	7.07	20.2	100.0	0.001	100.0	100.0	-1
Piedmont Total	48.7	48.6	47.8	47.1	46.2	1.3	9.8	9.9	1.0	1.4	17.5	18.4	18.0	18.3	18.5	100.0	100.0	100.0	100.0	100.0
H.C. 7 (8)	36.0	36.3	35.9	36.4	35.8	3.7	3.2	1.9	2.2	2.6	17.2	17.6	16.7	17.1	16.9	100.0	100.0	100.0	100.0	100.0
H.C. 8	44.1	42.8	39.5	38.9	37.7	1.1	6.0	1.4	3.1	3.0	14.0	14.5	15.6	16.7	16.9	100.0	100.0	100.0	100.0	100.0
Veneto total	39.8	39.4	37.6	37.6	36.7	2.4	2.1	9.1	5.6	2.8	15.7	191	16.2	6.91	16.9	100.0	100.0	0.001	100.0	100.0
H.C. 9	45.7	45.1	45.1	45.4	45.3	6.0	0.7	1.4	2.3	1.3	18.5	17.6	18.8	17.0	16.9	100.0	100.0	100.0	100.0	100.0
H.C. 10	49.2	49.4	49.5	48.7	48.7	8.0	1.6	0.2	2.1	2.1	20.3	19.9	22.2	20.3	20.3	100.0	100.0	100.0	100.0	100.0
H.C. 11	42.9	43.7	43.3	43.1	27.7	2.5	1.3	2.1	4.0	2.3	21.7	20.7	9.61	18.9	30.6	100.0	100.0	100.0	100.0	100.0
H.C. 12	41.7	40.6	37.9	37.8	38.0	3.2	5.1	3.7	2.0	1.8	21.2	19.9	19.3	21.4	20.0	100.0	100.0	100.0	100.0	100.0
H.C. 13	42.6	41.7	40.3	4.1	40.8	1.1	6.0	1.5	1.6	1.5	20.8	21.3	20.4	57.3	21.3	100.0	100.0	100.0	100.0	100.0
E.R. Total (9)	44.1	43.6	42.4	36.2	39.3	I.9	2.3	2.0	2.3	1.8	20.5	19.8	6.61	26.0	21.8	100.0	100.0	100.0	100.0	100.0
North Italy Total	45.0	44.8	43.6	41.1	41.5	8.1	9.1	1.5	8.1	6.7	18.2	18.4	18.3	20.2	19.4	100.0	100.0	0.001	100.0	100.0
H.C. 14 (8)	48.2	48.4	47.5	47.1	45.9	6.6	38	3.5	4.5	3.5	12.9	11.3	11.2	6.01	10.7	100.0	100.0	100.0	100.0	100.0
HC 15	45.2	44.2	43.0	43.5	43.7	3 1	3.1	2.4	23	2.5	15.7	16.0	15.3	15.6	15.0	1000	1000	100 0	1000	1000
Marche Total	46.3	45.8	44.6	44.8	44.5	3.0	3.3	2.8	3.1	2.9	14.7	14.3	13.8	13.8	13.4	100.0	100.0	100.0	100.0	100.0
H.C. 16	51.8	909	52.5	53.7	54.9	2.1	2.3	1.7	3.8	3.9	17.9	18.8	17.2	15.2	14.7	100.0	100.0	100.0	100.0	100.0
H.C. 17	52.7	52.4	47.7	20.0	53.0	2.5	4.5	6.9	2.6	4.0	17.1	14.9	16.8	17.2	10.0	100.0	100.0	100.0	100.0	100.0
H.C. 18	22.2	22.1	23.2	25.4	26.2	8.4	× ×	7.0	7.3	2.3	25.9	23.6	23.6	23.3	21.9	100.0	100.0	100.0	100.0	100.0
H.C. 19	40.0	39.7	39.8	41.1	39.7	1.4	3.0	2.8	3.4	3.6	18.8	15.1	16.3	15.5	14.0	100.0	100.0	100.0	100.0	100.0
H.C. 20	19.2	18.2	18.7	20.5	22.5	1.0	2.5	3.5	4.0	2.5	29.6	29.3	28.1	26.7	24.1	100.0	100.0	100.0	100.0	100.0
Lazio Total	36.2	35.5	35.8	37.2	38.3	3.8	4.7	4.5	4.7	3.1	22.2	50.9	20.7	6.61	17.8	100.0	100.0	100.0	100.0	100.0
Central Italy Total	38.7	38.1	38.0	39.2	39.9	3.6	4.4	4.1	4.3	3.1	20.3	19.3	0.6I	18.4	16.6	100.0	100.0	0.001	100.0	100.0
H.C. 21 (8)	40.9	40.3	40.1	41.0	42.0	1.9	3.0	0.4	0.7	1.9	11.5	13.2	12.3	14.9	15.3	100.0	100.0	100.0	100.0	100.0
H.C. 22	46.0	45.2	8.44	46.9	44.8	1.3	2.3	2.0	1.6	2.4	10.4	8.5	8.3	9.4	9.5	100.0	100.0	100.0	100.0	100.0
Apulia total	42.6	42.0	41.7	43.0	43.0	1.7	2.8	6.0	1.0	2.1	11.2	971	11.0	13.0	13.3	100.0	100.0	100.0	100.0	100.0
H.C. 23	57.4	55.5	53.5	53.3	53.1	1.9	3.5	3.6	2.2	2.6	5.7	6.7	7.7	67	6.9	100.0	100.0	100.0	100.0	100.0
H.C. 24 (8)	9.99	26.7	54.7	54.1	55.0	6.0	8.0	8.0	8.0	6.0	8.3	8.9	9.1	10.7	10.6	100.0	100.0	0.001	100.0	100.0
H.C. 25	44.4	43.7	41.0	34.8	40.8	4.5	3.1	2.9	3.1	9.0	10.2	13.2	9.81	29.4	15.3	100.0	100.0	100.0	100.0	100.0
H.C. 26	53.1	51.5	51.1	51.1	50.3	2.1	1.8	2.1	1.6	1.1	11.7	11.5	11.8	11.9	11.4	100.0	100.0	100.0	100.0	100.0
Calabria Total	54.3	53.2	51.5	50.2	51.0	2.0	2.2	2.3	1.8	1.4	8.6	9.5	10.6	12.9	10.4	100.0	100.0	100.0	100.0	100.0
H.C. 27	46.6	45.3	44.4	42.4	43.4	3.5	4.9	4.8	7.8	4.0	13.8	13.6	14.1	13.2	14.2	100.0	100.0	100.0	100.0	100.0
H.C. 28	50.2	50.3	47.6	46.0	46.4	3.7	4.7	4.2	4.1	2.7	14.4	12.4	12.5	15.5	16.0	100.0	100.0	100.0	100.0	100.0
H.C. 29	41.9	40.5	38.1	38.3	40.0	2.3	3.4	4.4	4.7	4.4	16.7	17.6	15.4	14.0	11.6	100.0	100.0	100.0	100.0	100.0
H.C. 30	58.4	52.8	52.9	48.3	47.6	2.0	6.1	6.2	10.0	5.4	11.7	15.5	13.4	14.2	14.8	100.0	100.0	100.0	100.0	100.0
H.C. 31	49.4	48.8	47.0	44.4	32.1	3.8	4.5	3.1	4.3	2.3	6.6	10.8	9.4	13.5	24.2	100.0	100.0	100.0	100.0	100.0
H.C. 32	53.2	51.3	50.0	49.5	48.4	2.6	3.2	4.5	2.9	2.7	9.2	6.6	8.4	11.3	11.2	100.0	100.0	100.0	100.0	100.0
H.C. 33	51.2	48.3	46.9	44.4	47.5	3.8	9.5	7.0	9.1	4.6	13.0	15.8	8.91	17.7	18.4	100.0	100.0	0.001	100.0	100.0
H.C. 34 (8)	31.7	29.8	27.3	25.5	27.1	5.6	1.6	1.7	1.7	1.6	29.1	30.9	27.1	30.7	31.4	100.0	100.0	100.0	100.0	100.0
Sicily Total	47.6	45.7	43.9	42.1	41.8	3.0	4.2	4.6	5.5	3.5	14.7	15.8	14.8	16.3	17.2	100.0	100.0	100.0	100.0	100.0
South Italy Total	47.7	46.2	44.7	43.7	43.8	2.5	3.5	3.4	3.9	2.8	12.8	13.7	13.2	15.0	15.1	100.0	100.0	100.0	100.0	100.0

- The Notes referred to in Table 1 are also shown in this Table relating to the percentage composition.
- The number of in-hospital stays was noted in the Management Report attached to the approved and published Financial Statements.
 - Includes revenues from hospitalization in the strict sense, but also from specialist visits, File F, etc.
- The values shown represent the difference between the total revenues and revenues from health services + revenues from co-payment charges + revenues for "by-function" activities.

 - These include pharmaceutical products, blood derivatives, blood, reagents, X-ray plates, chemicals, food products, stationery, fuel, etc. These include the costs for meal services, laundry, cleaning, etc. 26
- This is the difference between total costs and costs for the purchase of goods + costs for non-health care services + costs for personnel + costs for provisions. It also includes the costs for health services that are not always clearly identifiable in the financial statements, though it does not include financial charges.
 - This is reported as a final result on the Income Statement.

9

- In some cases there are "Other Revenues" with a negative sign: this is the result of corrective items introduced when preparing the Financial Statements (e.g.: gradual repayment of advances for machinery purchases, etc. by the Region). 8
- a special unified management was enacted (a Polyclinic is more than a normal hospital), in which, however, the staff remained employed by the AUSL: hence the upward shift in hospitalizations and consequent health care and social-health revenues as well as revenues from co-payment charges and "by-function" In an Emilia Romagna Hospital Center (H.C. 10) the 2017 values were estimated for both revenues and costs, assuming a scenario of total continuity with respect to the previous year, because this Hospital Center, as of June 30, 2017 was merged into an AUSL. While in another Emilia Romagna Hospital Center (H.C. 11) activities, and other Revenues as well as Cost items.
- Processing of the Income Statement data of the individual Hospital Centers and University Hospital Centers, shown in Table App. 1. *) Final Balance Reports of the individual Hospital Centers and University Hospital Centers for the years indicated. Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 4 – Revenues exceeding the limit of 30% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities present in the 2017 Income Sectionary accounts as the consistency of annexing the consistency of the same "by-function" activities.

present in the 2017 Income Sta	present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)	r the same year, for the H	lospital Centers considered (I. V. in thousands of 	'euros)	
HOSPITAL CENTERS and UNIVERSITY HOSPITAL CENTERS	INCIDENCE OF "BY- FUNCTION" ACTIVITIES, RECALCULATED AS PER THE MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 30% (1)	COUNTERVALUE OF "BY- FUNCTION" ACTIVITIES, AS PER THE 2017 IS	COUNTERVALUE OF "BY-FUNCTION" ACTIVITIES, CALCULATED ON THE BASIS OF THE MINISTERIAL DECREE UP TO A MAXIMUM OF 30%	DIFFERENCE (D = C - B)	RESULTS OF THE FISCAL YEAR 2017	ALGEBRAIC SUM (F = D + E)
	A	В	C	Q	E	Ŧ
H.C. 1	27.7				1,926	1,926
H.C. 2	25.0				- 2,406	- 2,406
H.C. 3	22.9					
H.C. 4	30.9	75,350	72,236	- 3,114	1,180	- 1,934
H.C. 5	25.7		-		- 1,495	- 1,495
H.C. 6	41.8	394,630	235,631	- 158,999	- 17,478	- 176,477
Piedmont Total	33.5	469,980	307,867	- 162,113	- 18,273	- 180,386
H.C. 7	21.0					
H.C. 8	18.7				•	
Veneto total	19.8					
H.C. 9	16.8					
H.C. 10	13.7					
H.C. 11	16.2					
H.C. 12	18.2					
H.C. 13	24.8					
Emilia Romagna Total	17.8					
NORTH ITALY TOTAL	24.5	469,980	307,867	- 162,113	- 18,273	- 180,386
H.C. 14	30.2	71,190	70,525	- 665		- 665
H.C. 15	23.7					
Marche Total	26.2	71,190	70,525	- 665		- 665
H.C. 16	17.7				- 130,712	- 130,712
H.C. 17	11.0				- 83,599	- 83,599
H.C. 18	19.6				- 104,166	- 104,166
H.C. 19	10.9				- 41,510	- 41,510
H.C. 20	16.0				- 24,902	- 24,902
Lazio Total	16.3				- 384,889	- 384,889
CENTRAL ITALY TOTAL	19.5	71,190	70,525	- 665	- 384,889	- 385,554
						,

(Continued) Table App. 4— Revenues exceeding the limit of 30% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)

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HOSPITAL CENTERS and UNIVERSITY HOSPITAL CENTERS	INCIDENCE OF "BY- FUNCTION" ACTIVITIES, RECALCULATED AS PER THE MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 30% (1)	COUNTERVALUE OF "BY- FUNCTION" ACTIVITIES. AS PER THE 2017 IS	"BY-FUNCTION" ACTIVITIES, CALCULATED ON THE BASIS OF THE MINISTERIAL BECREE UP TO A MAXIMUM OF 30%	DIFFERENCE (D = C - B)	RESULTS OF THE FISCAL YEAR 2017	ALGEBRAIC SUM (F = D + E)
	V	В	C	D	E	Ŧ
H.C. 21	35.7	160,050	123,382	- 36,668	- 9,740	- 46,408
H.C. 22	30.9	78,004	74,728	- 3,276		- 3,276
Apulia total	34.0	238,054	198,110	- 39,944	- 9,740	- 49,684
H.C. 23	37.5					
H.C. 24	27.9				- 12,930	- 12,930
H.C. 25	22.8				- 12,319	- 12,319
H.C. 26	34.4	59,323	48,587	- 10,736		- 10,736
Calabria Total	32.2	59,323	48,587	- 10,736	- 25,249	- 35,985
H.C. 27	30.7	•	-			
H.C. 28	29.4	•				
H.C. 29	34.6	128,190	103,872	- 24,318		- 24,318
H.C. 30	41.9	161,59	39,113	- 26,684		- 26,684
H.C. 31	29.5		-			
H.C. 32	37.6	610,901	75,489	- 30,530		- 30,530
H.C. 33	43.6	130,427	72,438	- 57,989		- 57,989
H.C. 34	33.4	78,493	67,196	- 11,297		- 11,297
Sicily Total	35.2	508,926	358,108	- 150,818		- 150,818
SOUTH ITALY TOTAL	34.4	806,303	604,805	- 201,498	- 34,989	- 236,487
OVERALL TOTAL	26.8	1,347,473	983,197	- 364,276	- 438,151	- 802,427

(1) The values contained in the last column of Table 25 are shown (those above 30.0% are in bold). Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 5 – Revenues exceeding the limit of 25% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)

present in the 2017 Income St.	present in the 2017 income statement, as welt as the operating results for the same year, for the Hospital Centers considered (A.V. in Industrial of euros)	r the same year, Jor the H	ospiiai Centers considered (z	1. v. tn tnousanas of	euros)	
September 1 Appropriate September 2	INCIDENCE OF "BY- FUNCTION" ACTIVITIES,	COUNTERVALUE OF "BY-	COUNTERVALUE OF "BY-FUNCTION" ACTIVITIES,	a) Na quadin	RESULTS OF	ALGEBRAIC
HOSPITAL CENTERS and UNIVERSITY HOSPITAL CENTERS	MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 30%	FUNCTION" ACTIVITIES, AS	THE BASIS OF THE MINISTERIAL	(D = C - B)	FISCAL YEAR 2017	\mathbf{SUM} $(\mathbf{F} = \mathbf{D} + \mathbf{E})$
	(1)	PER THE 2017 IS	DECREE UP TO A MAXIMUM OF 25%			
	A	В	О	D	E	F
H.C. 1	27.7	41,647	36,248	- 5,399	1,926	-3,473
H.C. 2	25.0	67,365	67,326	- 39	- 2,406	-2,445
H.C. 3	22.9			-	-	0
H.C. 4	30.9	75,350	56,183	- 19,167	1,180	-17,987
H.C. 5	25.7	46,076	44,318	- 1,758	- 1,495	-3,253
H.C. 6	41.8	394,630	183,268	- 211,362	- 17,478	-228,840
Piedmont Total	33.5	625,068	387,343	- 237,725	- 18,273	- 255,998
H.C. 7	21.0			-		0
H.C. 8	18.7			-		0
Veneto total	19.8	-		-		0
H.C. 9	16.8			-		0
H.C. 10	13.7			-		0
H.C. 11	16.2			-		0
H.C. 12	18.2			-		0
H.C. 13	24.8			-		0
Emilia Romagna Total	17.8	-		-		0
NORTH ITALY TOTAL	24.5	625,068	387,343	- 237,725	- 18,273	- 255,998
H.C. 14	30.2	71,190	54,853	- 16,337		-16,337
H.C. 15	23.7			-		0
Marche Total	26.2	71,190	54,853	- 16,337		- 16,337
H.C. 16	17.7			-	- 130,712	-130,712
H.C. 17	11.0			-	- 83,599	-83,599
H.C. 18	19.6			1	- 104,166	-104,166
H.C. 19	10.9			-	- 41,510	-41,510
H.C. 20	16.0				- 24,902	-24,902
Lazio Total	16.3		1	-	- 384,889	- 384,889
CENTRAL ITALY TOTAL	19.5	71,190	54,853	- 16,337	- 384,889	-401,226

(Continued) Table App. 5 - Revenues exceeding the limit of 25% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)

	ALGEBRAIC SUM (F = D + E)	Ą	-73,826	-19,882	- 93,708	-32,069	-18,902	-12,319	-21,533	- 84,823	-14,429	-14,850	-47,400	-35,376	-12,484	-47,305	-74,087	-26,230	-272,160	- 412,651	1 060 875
usanas of euros)	RESULTS OF THE FISCAL YEAR 2017	E	- 9,740		- 9,740		- 12,930	- 12,319		- 25,249										- 34,989	138 151
isiaerea (A. V. in thoi	DIFFERENCE (D = C - B)	Q	- 64,086	- 19,882	- 83,968	- 32,069	- 5,972	-	- 21,533	- 59,574	- 14,429	- 14,850	- 47,400	- 35,376	- 12,484	- 47,305	- 74,087	- 26,230	- 272,160	- 377,662	1021 737
Jor the Hospital Centers con	COUNTERVALUE OF "BY-EUNCTION" ACTIVITIES, CALCULATED ON THE BASIS OF THE MINISTERIAL DECREE UP TO A MAXIMUM OF 25%	C	95,964	58,122	154,086	40,071	37,654		37,790	115,515	44,217	59,709	80,790	30,421	49,097	58,714	56,340	52,263	431,552	623,427	1 065 673
results for the same year,	COUNTERVALUE OF "BY- FUNCTION" ACTIVITIES, AS PER THE 2017 IS	В	160,050	78,004	238,054	72,140	43,626		59,323	175,089	58,646	74,559	128,190	<i>L6L</i> '59	61,581	106,019	130,427	78,493	703,712	1,001,089	1 607 377
activities present in the 2017 income Statement, as well as the operating resuits for the same year, for the Hospital Centers constaered (A. F. in thousands of euros)	INCIDENCE OF "BY- FUNCTION" ACTIVITIES, RECALCULATED AS PER THE MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 25% (1)	A	35.7	30.9	34.0	37.5	27.9	22.8	34.4	32.2	30.7	29.4	34.6	41.9	29.5	37.6	43.6	33.4	35.2	34.4	8 96
activities present in the 2017 L	HOSPITAL CENTERS and UNIVERSITY HOSPITAL CENTERS		H.C. 21	H.C. 22	Apulia total	H.C. 23	H.C. 24	H.C. 25	H.C. 26	Calabria Total	H.C. 27	H.C. 28	H.C. 29	H.C. 30	H.C. 31	H.C. 32	H.C. 33	H.C. 34	Sicily Total	SOUTH ITALY TOTAL	OVEP ALL TOTAL

(1) The values contained in the last column of Table 25 are shown (those above 25.0% are in bold) Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 6 - Revenues exceeding the limit of 20% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities

	RESULTS OF ALGEBRAIC THE SUM (F = D + E)	T	1,926 -12,535	-2,406 -19,277	0 -8,776	1,180 -32,033	-1,495 -14,333	-17,478 -274,657	-18,273 -361,609	-6,825	0 0	-6,825	0	0	0	0	-17,112	-17,112	-18,273 -385,546	-30,051	-17,259	0 -47,309	-130,712 -130,712	-83,599 -83,599	-104,166 -104,166	-41,510 -41,510	-24,902 -24,902	-384,889 -384,889	
V. in thousands of euros)	DIFFERENCE TI (D = C - B) EISCAI	a	-14,461	-16,871	-8,776	-33,213	-12,838	-257,179	-343,336 -18	-6,825	0	-6,825	0	0	0	0	-17,112	-17,112	-367,273	-30,051	-17,259	-47,309	0 -130	E8- 0	0 -102	0 -4	77- 0	98-	
ospital Centers considered (A.	COUNTERVALUE OF "BY-FUNCTION" ACTIVITIES, CALCULATED ON THE BASIS OF THE MINISTERIAL DECREE UP TO A MAXIMUM OF 20%	C	27,186	50,495	46,565	42,138	33,238	137,451	337,072	113,185		113,185					53,464	53,464	503,721	41,140	71,572	112,712						-	
r the same year, for the H	COUNTERVALUE OF "BY- FUNCTION" ACTIVITIES, AS PER THE 2017 IS	В	41,647	67,365	55,340	75,350	46,076	394,630	680,408	120,010		120,010					70,575	70,575	840,993	71,190	88,831	160,021						-	
present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)	INCIDENCE OF "BY- FUNCTION" ACTIVITIES, RECALCULATED AS PER THE MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 20% (1)	V	27.7	25.0	22.9	30.9	25.7	41.8	33.5	21.0	18.7	19.8	16.8	13.7	16.2	18.2	24.8	17.8	24.5	30.2	23.7	26.2	17.7	11.0	19.6	10.9	16.0	16.3	
present in the 2017 Income Sta	HOSPITAL CENTERS and UNIVERSITY HOSPITAL CENTERS		H.C. 1	H.C. 2	H.C. 3	H.C. 4	H.C. 5	H.C. 6	Piedmont Total	H.C. 7	H.C. 8	Veneto total	H.C. 9	H.C. 10	H.C. 11	H.C. 12	H.C. 13	Emilia Romagna Total	NORTH ITALY TOTAL	H.C. 14	H.C. 15	Marche Total	H.C. 16	H.C. 17	H.C. 18	H.C. 19	H.C. 20	Lazio Total	

(Continued) Table App. 6— Revenues exceeding the limit of 20% for "by-function" activities, calculated as per the Ministerial Decree, starting from the value of the same "by-function" activities present in the 2017 Income Statement, as well as the operating results for the same year, for the Hospital Centers considered (A.V. in thousands of euros)

1			COUNTEDVALIE OF		,	
INCIDENCE OF "BY- FUNCTION" ACTIVITIES, RECALCULATED AS PER THE MINISTERIAL DECREE, WITH RECOGNITION OF UP TO 20%	TTIES, PER THE EE, WITH P TO 20%	COUNTERVALUE OF "BY- FUNCTION" ACTIVITIES, AS PER THE 2017 IS	"BY-FUNCTION" ACTIVITIES, CALCULATED ON THE BASIS OF THE MINISTERIAL DECREE UP TO A MAXIMUM OF 20%	DIFFERENCE (D = C - B)	RESULTS OF THE FISCAL YEAR 2017	ALGEBRAIC SUM (F = D + E)
V		В	Э	Q	E	Ā
35.7		160,050	71,973	-88,077	-9,740	-97,817
30.9		78,004	43,592	-34,413	0	-34,413
34.0		238,054	115,565	-122,490	-9,740	-132,230
37.5		72,140	30,053	-42,087	0	-42,087
27.9		43,626	28,241	-15,385	-12,930	-28,315
22.8		17,594	14,917	-2,678	-12,319	-14,997
34.4		59,323	28,342	-30,981	0	-30,981
32.2		192,683	101,553	-91,130	-25,249	-116,379
30.7		58,646	33,163	-25,483	0	-25,483
29.4		74,559	44,782	-29,778	0	-29,778
34.6		128,190	60,592	-67,598	0	-67,598
41.9		162,797	22,816	-42,981	0	-42,981
29.5		61,581	36,823	-24,758	0	-24,758
37.6		106,019	44,035	-61,984	0	-61,984
43.6		130,427	42,255	-88,172	0	-88,172
33.4		78,493	39,198	-39,296	0	-39,296
35.2		703,712	323,664	-380,048	0	-380,048
34.4		1,134,449	540,781	-593,668	-34,989	-628,657
26.8		2,165,463	1,157,213	- 1,008,250	-438,151	-1,446,401
	1					

(1) The values contained in the last column of Table 25 are shown (those above 20.0% are in bold). Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

The second method applied for this Report made use of some field surveys concerning the relationships between users/citizens and hospital services on the one hand, and a detailed exploration of the two important topics of waiting lists and access to Emergency Room services, on the other: for these two topics, experiences and opinions were taken from the population as a whole, from that portion of the population that has had experience with waiting lists and/or the Emergency Room, and from caregivers.

As per tradition, the first survey was aimed at a national representative sample of the adult population 18 years of age and older. Questions were selected to allow for the measurement of the evolution over time of knowledge, behaviors, opinions and assessments by both actual users of hospital services and citizens as a whole.

The topics covered involve the methods of access, the awareness of possible hospitalization alternatives, the perceived quality of the services by the respondents, as well as the overall opinion of the mixed public - accredited private hospital system that characterizes our country. All of this took into account the different types of existing hospitalization facilities, namely public hospitals, accredited private hospitals and private clinics.

For this purpose the usual questionnaire was administered, and included:

- a) questions directed at users of hospital services in the last twelve months, specific to:
 - the type of hospital service used;
 - the type of hospital visited (public, accredited private, or private clinic);
 - the level of satisfaction with the services received the last time any of these facilities were visited;
 - the manner in which the respondent made his/her decision to make use of the hospital facility most recently visited;
 - the level of the respondent's 'loyalty' to the most recent facility visited:
- and some questions were instead addressed to the entire survey sample of citizens 18 years and older. These questions pertained to information including:
 - whether or not hospital services had been accessed in the last twelve months by the interviewee and/or members of his/her family;
 - the level of awareness regarding the ability to access both public and accredited private hospitals for which there are no charges for patients;
 - the ability to choose hospitals outside the Region in which the respondent resides;
 - awareness of the new legislation that beginning in October 2013 allows patients to seek healthcare and hospital services from facilities of

- other EU countries under coverage of the Italian Health Service (even if said opportunity remains subject to prior authorization from the local healthcare authorities and the advance payment of expenses by the patient, subsequently reimbursed);
- the inclination of the respondent to make use of facilities other than those located in their town, province, Region, or even, Italy, in the event of the need for serious health reasons (to this was added a question regarding the theoretical behavior of citizens in the event of serious and/or urgent health problems, in order to verify the increasing use of hospital facilities compared to local medical services);
- the levels of satisfaction regarding Italian hospitals, divided by the three types: public hospitals, accredited private hospitals and private clinics);
- opinions on some statements with a view to keeping the current mixed public/accredited private healthcare system as an integrated service provider and how more precise information might be provided to users by the NHS;
- the willingness of the respondent to ideally take on some additional costs in order to have more choices than are currently available.

To this first section of the questionnaire two other Sections were added this year, dedicated to experiences with the waiting lists and to access to the Emergency Room in the past twelve months, respectively. In the first instance the questions concerned:

- experience or lack of experience with waiting lists;
- the type and length of waiting lists for the performance of laboratory exams, diagnostic tests, specialist visits, or small outpatient procedures at local health facilities (or in affiliated private centers) or at hospitals; it was also asked what behavior the respondents adopted with respect to the waiting lists they were assigned and their relative duration;
- but also the type and length of waits experienced with regard to actual hospital admissions for treatment and/or to undergo surgical procedures, as well as the behaviors adopted in this regard by the respondents;
- the evaluation of some proposals to improve the current waiting list situation and make them shorter and more efficient;
- any access to Central Booking System (CUP, Centro Unico di Prenotazione) and related behavior by the respondent with respect to the booking proposals received;
- the satisfied/dissatisfied opinions about the health care and social-assistance services present in the respondent's Region of residence, regardless of whether or not one has had the opportunity to use these services in the

last twelve months, but also the opinions of the improvement/deterioration of the services provided in terms of laboratory exams, diagnostic tests, specialist visits, or in-hospital stays compared to the past.

The following Section relates to the topic of the Emergency Room and contains questions addressing the following topics:

- whether access was made to services or not;
- the type of hospital selected, the reasons that led respondents to make use of the Emergency Room, the type of code that was assigned to them, as well as the method of entry to the Emergency Room (alone or with a carer), the duration of the waits, needs that were satisfied or unsatisfied while waiting for the visit, as well as the need relating to the information they desired to receive during the time spent in the Emergency Room;
- the "events" that took place following access to the Emergency Room services (discharge, and also further exams/tests, as well as temporary admissions, hospitalizations in the same hospital or in other hospitals, etc.);
- evaluation of the experiences at the Emergency Room both for the last visit and on previous occasions, as long as these were during the last twelve months:
- evaluation of the travel necessary, in general, to get to an Emergency Room from the respondents' place of residence, also reporting any difficulties;
- evaluation of the presence of local accredited private hospitals that could offer Emergency Services as an alternative to public hospitals and were closer to the respondents' homes;
- and finally, evaluation of the subjects to whom the respondents prefer to turn in the event that they have a serious and/or urgent health problem to perform laboratory exams, diagnostic tests, specialist visits, hospitalizations, in order to assess the extent of the propensity to choose the Emergency Room as a (proper or improper) "alternative" to basic health services as well as in order to speed up possible hospital admissions.

The questionnaires were administered in September 2018, using a special electronic panel comprised of 2,000 Italian families, in which individual members responded to the questions contained in the initial questionnaire and in the two additional Sections just described.

The above panel is maintenanced annually in order to compensate for any lack of functional collaboration by part of the respondents, and to ensure the ongoing representative nature of the survey sample used (such maintenance affecting approximately 15% of the total survey sample each year).

The collected survey responses were subsequently weighted in such a

way as to be able to fully respect a sort of ideal sample that of the universe of the Italian adult population aged 18 years and older, numbering 4,020 units, compared to 3,824 physically completed questionnaires: all of the surveys took into account gender, age, educational level, geographical area of residence, size of the municipality of residence and the profession of the respondent.

The survey sample's level of error is approximately $\pm 1.55\%$, with a confidence interval of 95%.

Subsequently, the information thus collected was processed in order to obtain simple distribution tables, which were then used to make some crosschecks of variable groups considered particularly significant, as shown in Section 3 of the Appendices.

The overall results of the survey, with reference to the first group of questions (and net of the second and third sections), may be found, along with the relative commentary, in Part Two of the Report.

The social-personal profile of the respondents, appropriately weighted as just mentioned, is provided in the Tables from App. 7 to App. 13. These illustrate the basic characteristics of the sample used for the yearly survey.

Gender	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2002	2006	2005
- Male	47.7	47.7	47.7	47.7	47.7	47.7	48.0	48.0	48.0	48.0	48.0	48.0	47.8	47.8
- Female	52.3	52.3	52.3	52.3	52.3	52.3	52.0	52.0	52.0	52.0	52.0	52.0	52.2	52.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,011

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Age range	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2002	2006	2005
- 18-24 years	9.8	9.8	9.8	9.8	9.8	9.8	8.6	9.8	8.7	8.7	8.7	0.6	6.6	6.6
- 25-34 years	14.3	14.3	14.3	14.3	14.3	14.3	15.4	15.4	15.9	16.3	16.7	17.7	18.6	18.6
- 35-54 years	36,9	36,9	36,9	36.9	37.0	37.0	36.9	36.9	36.6	36.3	36.0	35.4	34.5	34.5
 ≥ 55 years 	40,2	40,5	40,5	40.1	40.1	40.1	39.1	39.1	38.8	38.7	38.6	37.9	37.0	37.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,011
Tubic 71pp: / Eish to unon of respondents by residence (70)	caponacius o	y residen	2017	1,00			6106		0100	0000	0000	1000	,,,,,	
Distribution	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
North-West	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.8	26.9	26.9	26.9	26.7	26.9
North-East	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.2	19.2	19.2	19.2	19.1
- Center	19.3	18.1	19.1	18.1	18.2	18.2	18.1	18.0	18.4	18.6	18.6	17.9	17.6	17.6
 South and Islands 	34.7	35.9	34.9	35.9	35.8	35.8	35.8	35.9	35.5	35.3	35.3	36.0	36.5	36.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,011
														Ī

Table App. 8 – Age of the respondents (%)

Table App. 9 – Distribution of respondents by	spondents by	v residence	(%) ə:											
Distribution	2018	2017	2016	2015	2014	2013	2012	2011	2010	5000	2008	2002	2006	200.
North-West	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.8	26.9	26.9	56.9	26.7	76.9
North-East	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.2	19.2	19.2	19.2	19.
- Center	19.3	18.1	19.1	18.1	18.2	18.2	18.1	18.0	18.4	18.6	18.6	17.9	17.6	17.0
 South and Islands 	34.7	35.9	34.9	35.9	35.8	35.8	35.8	35.9	35.5	35.3	35.3	36.0	36.5	36.
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,01
Source: survey by Ermeneia – Stu	seneia – Studi & Strategie di Si	gie di Sis	stema. 201	8.										

Table App. $10 - Distribution of respondents by size of town of residence (%)$	respondent	s by size c	of town of	residence	s (%)									
Size	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
- Up to 20,000 inhabitants	47.6	47.6	47.6	47.6	47.6	47.6	46.9	46.9	47.0	47.2	47.2	47.4	47.8	47.8
 20,001 to 100,000 inhabitants 	29.2	29.2	29.2	29.2	29.2	29.2	29.7	39.7	29.5	29.2	29.4	29.1	28.4	28.4
- 100,001 inhabitants and	23.2	23.2	23.2	23.2	23.2	23.2	23.4	23.4	23.5	23.6	23.4	23.5	23.8	23.8
Total A.V.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018	tudi & Stra	tegie di Si	istema, 20	81			,	,	,		,			
Table App. 11 – Occupational activity of the respondents (%)	ctivity of th	e respona	lents (%)											
Occupational Activity	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
 Self-employed 	11.4	11.4	11.4	11.4	11.4	11.4	11.5	11.6	12.0	12.4	12.2	12.6	12.6	12.6
 Employed 	18.9	18.8	18.9	18.9	18.9	18.9	18.5	18.5	18.8	19.0	18.6	18.1	18.2	33.8
- Laborer	15.4	15.4	15.4	15.4	15.4	15.4	16.2	16.2	16.4	15.9	15.7	15.6	15.6	•
 Housewife/Pensioner 	39.8	40.0	40,0	40,0	40.0	40.0	41.0	40.9	39.8	40.0	40.6	38.6	38.7	38.7
 Job seekers 	2.4	4.2	4.1	4.1	4.1	4.1	3.8	3.8	3.3	3.0	2.9	6.1	6.1	6.1
- Other	12.1	10.2	10.2	10.2	10.2	10.2	0.6	0.6	6.7	6.7	10.0	0.6	8.8	8.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,011
Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018	tudi & Stra	tegie di Si	istema, 20	81										
Table App. 12 – Education of the respondents (%)	e responde	1ts (%)												
Qualification	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
 No qualifications/ Primary school 	23.2	23.2	23.2	23.2	23.2	23.2	24.9	24.9	25.8	26.8	27.8	28.6	28.0	28.0
 Lower secondary school certificate 	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.4	35.0	34.6	34.5	36.3	36.3
Higher secondary school contificate/First excla-														
degree, Second cycle	41,3	41,3	41,3	41,3	41.3	41.3	39.6	39.6	38.8	38.2	37.6	36.9	35.7	35.7
degree, Third cycle degree														
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,140	4,210	4,160	4,350	4,011
Source: survey by Ermeneia - Studi & Strategie di Sistema, 2018	tudi & Stra	tegie di Si	istema, 20	81										

Status	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
- Low/Low-Middle	46.9	50.3	47,2	47.5	49.3	49.5	50.3	50.2	48.7	50.8	47.4	45.8	42.8	8.4
- Middle	44.4	44.5	48.3	37.4	27.3	27.3	25.5	25.9	26.6	24.4	20.1	20.4	21.1	20.3
 Middle-High/High 	8.7	5.2	4,5	15.1	23.4	23.2	24.2	23.9	24.7	24.8	32.5	33.8	36.1	34.9
Fotal	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	4,020	4,020	4,020	4,020	4,020	4,020	4,070	4,070	4,110	4,097	4,210	4,160	4,350	4,011

208

In parallel, in addition to the survey on the Italian population sample aged 18 years and older, an oversampling survey was carried out (referred to in the course of the text by the term "extended" sample) to complement the first. All of this was done using an Internet panel of people with waiting list and/or Emergency Room experiences in the last twelve months, in order to increase the overall number of respondents meeting these two specific characteristics. A set of questions was presented to this set of respondents which included the two additional Sections mentioned above. The operation was conducted in September 2018 and included 546 valid questionnaires.

Then the "extended" sample was checked and in turn weighted according to the same social-demographic variables used for the survey carried out on the Italian population aged 18 years and older by means of the electronic panel.

The processing of the total data collected in this manner, concerning the topic of waiting lists and that of access to the Emergency Room generated a total sample of 2,371 individuals, comprised of:

- 1,825 cases from the electronic panel survey;
- and 546 cases deriving from the Internet panel survey.

The sampling error for this database, with a confidence interval of 95%, is equal to $\pm 2.01\%$.

Subsequently, the information thus collected was processed in order to obtain simple distribution tables, which were then used to make some crosschecks of variable groups considered particularly significant, as shown in Section 4 of the Appendices.

The complete results of the survey may be found, along with the relative commentary, in Part Three of this Report, in which the survey data on caregivers (referred to below) is simultaneously reported (and compared).

The social-personal profile of the respondents belonging to the "extended" sample (2,371 units) is provided in the Tables from App. 14 to App. 20. They illustrate the characteristics of the sample that saw the confluence of the responses of the electronic panel and those collected via the Internet on the two specific themes of the waiting lists and access to the Emergency Room

Table App. 14 – Gender of the respondents (%)

Gender	% of those who had experience with the
Genuer	Emergency Room and/or waiting lists
- Male	43.3
- Female	56.7
Total	100.0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 15 – Age of the respondents (%)

Age range	% of those who had experience with the Emergency Room and/or waiting lists
- 18-24 years	5.9
- 25-34 years	13.5
- 35-54 years	37.7
 ≥ 55 years 	42.9
Total	100,0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 16 – Distribution of respondents by residence (%)

Dis	stribution	% of those who had experience with the Emergency Room and/or waiting lists
_	North-West	29.3
_	North-East	18.7
_	Center	20.4
_	South and Islands	31.6
To	tal	100.0
Α.	V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 17 – Distribution of respondents by size of town of residence (%)

Size	% of those who had experience with the Emergency Room and/or waiting lists
- Up to 20,000 inhabitants	46.3
 20,001 to 100,000 inhabitants 	31.4
 100,001 inhabitants and more 	22.3
Total	100.0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 18 – Occupational activity of the respondents (%)

Occupational Activity	% of those who had experience with the Emergency Room and/or waiting lists
- Self-employed	13.8
- Employed	21.0
- Laborer	11.9
 Housewife/Pensioner 	41.8
 Searching for a job (Unemployed, laid off and/or on availability lists, on leave pending retirement) 	4.9
 Other non-professional condition 	6.6
Total	100.0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 19 – Education of the respondents (%)

Qualification	% of those who had experience with the Emergency Room and/or waiting lists
 No qualifications/Primary school Lower secondary school certificate 	24.1 29.8
 Higher secondary school certificate/First cycle de- gree, Second cycle degree, Third cycle degree 	46.1
Total	100.0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 20 – Estimated socioeconomic status of the respondents (%)

Charles	% of those who had experience with the
Status	Emergency Room and/or waiting lists
- Low/Low-Middle	45.9
- Middle	44.8
Middle-High/High	9.3
Total	100.0
A.V.	2,371

Source: survey by Ermeneia – Studi & Strategie di Sistema. 2018

A third survey was then conducted on a sample of caregivers, or on the people who, within the panel families, usually make decisions in the health and assistance field related to the various members of the household. The subject of the aforementioned survey concerns:

- on the one hand, the topic already mentioned of the experiences with waiting lists and/or access to the Emergency Room, using the same questions given to the population sample aged 18 years and older and to the Internet panel;
- and, on the other hand, the subject of the postponing and/or forgoing of services as well as any alternative behavior regarding unsatisfactory experiences at public hospitals.

With regard to the second topic mentioned, some questions were already used in the previous two years in order to obtain a comparison of the trend of the phenomena concerning, specifically:

- the postponing and/or forgoing of treatment in 2018, but also in 2017 and 2016:
- reasons for the postponing and/or foregoing of treatments;
- the satisfied/dissatisfied opinions regarding both health and social-assistance services of the hospitals of their Region of residence regardless of whether these services were used in the last twelve months, as well as the satisfied/dissatisfied opinions regarding public and accredited private hospital facilities and private clinics if the latter were actually used by the respondents in the last twelve months;
- any recourse to accredited private hospitals or private clinics in the last two years in the event the respondent or the other members of his/her family encountered any inconvenience with respect to the services provided by public hospital facilities (also attempting to collect the reasons for said alternative decision);
- finally, the use and/or inclination to resort to the use of hospital facilities present in Italian Regions other than that of residence of the respondents.

This questionnaire was given in September 2018, and resulted in the collection of 1,745 valid responses. Again in this case the family electronic panel, mentioned for the survey on the population, was used, and the responses yielded a representative national sample after a slight weighting brought the questionnaires to 2,000 respondent units (the last of which were obtained by weighting the 1,745 raw respondents on the basis of the structural variables inherent to the family panel).

The sampling error of the caregiver survey, with a confidence interval of 95%, is equal to $\pm 2.35\%$.

The information collected was processed so as to attain simple distribution Tables, on the basis of which a series of cross-checks were made, using several particularly significant variables that are described in below in Section 5 of the Appendices.

The results of the caregiver survey and the related commentary may be found, along with the results of the "extended" sample of the population in Part Three of the Report.

The social-personal profiles for the care-giver respondents are given in the tables 21-28. These describe the characteristics of the sample used for the survey.

Finally, the third method used to prepare the Report was that of defining the usual set of facility indicators, containing the most recent data available on the Italian hospital system. These have to do with the number and type of facilities, the relevant activity data, the size of the staff and spending. These indicators may be found in Part Four of this Report.

Table App. 21 – Position of the caregivers interviewed (%)

Re.	sponse	2018	2017	2016	2015	2014	2013
_	Wife (or female partner)	34.0	38.0	39.6	34.9	24.6	43.2
_	Husband (or male partner)	36.9	35.6	36.0	24.9	38.3	25.6
_	Sole family member (female)	6.7	6.9	6.5	13.8	6.4	(21.6
_	Sole family member (male)	3.1	3.3	3.4	12.9	2.9	{ 21,6
_	Son	3.4	2.5	1.4	3.0	-	2.4
_	Daughter	9.6	7.6	8.7	4.4	0.1	3.9
_	Co-habiting sister (of husband or wife)	0.3	0.2	0.3	0.4	0.9	0.1
_	Co-habiting brother (of husband or wife)	0.2	0.1	-	0.3	0.4	0.1
_	Other co-habiting relative (man)	1.2	0.5	0.5	0.5	0.1	0.3
_	Other co-habiting relative (woman)	1.9	2.8	1.2	2.9	0.2	1.1
_	Other person not related, but co-habiting (man)	0.6	0.4	0.2	0.2	24.6	0.7
_	Other person not related, but co-habiting (woman)	0.5	0.2	0.3	0.2	1.5	0.7
_	Other	1.6	1.9	1.9	1.6	-	0.3
To	al	100.0	100.0	100.0	100.0	100.0	100.0
Α.	V.	2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 22 – Gender of the caregiver (%)

Tuote iipp. 22 Gent	er or the curegiver (70)					
Gender	2018	2017	2016	2015	2014	2013
- Male	42.2	42.2	42.2	42.2	39.0	37.6
Female	57.8	57.8	57.8	57.8	61.0	62.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 23 – Age – group of the caregivers (%)

Those Tipp. 25 Tige group of the	0410511015 (70)					
Age range	2018	2017	2016	2015	2014	2013
- 18-34 years	10,5	10,5	10,5	10,5	9.5	10,3
- 35-54 years	45,7	45,7	45,7	45,7	41.6	41.8
 ≥ 55 years 	43,8	43,8	43,8	43,8	48.9	47.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 24 – Geographical distribution of caregivers (%)

Geographical distribution	2018	2017	2016	2015	2014	2013	
- North-West	28.1	28.1	28.1	28.2	28.2	28.2	
North-East	19.8	19.8	19.8	19.8	19.8	19.8	
- Center	19.2	19.1	20.2	19.4	18.7	18.8	
 South and Islands 	32.9	33.0	31.9	32.6	33.3	33.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 25 – Distribution of caregivers by size of town of residence (%)

Size		2018	2017	2016	2015	2014	2013
_	Up to 20,000 habitants	47.0	47.0	47,0	47,0	47.0	47.0
_	20,001-100,000 habitants	28.5	28.5	28.5	28.5	28.5	28.5
_	100,001 habitants and more	24.5	24.5	24.5	24.5	24.5	24.5
Total		100.0	100.0	100.0	100.0	100.0	100.0
A.V.		2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 26 – Occupational activity of the caregivers (%)

Occupational Activity	2018	2017	2016	2015	2014	2013
 Self-employed 	5.2	5.2	5.2	14.7	11.7	11.6
 Employed 	39.3	39.3	39.3	35.3	34.0	33.5
– Laborer	8.2	8.2	8.2	7.4	7.8	7.3
 Housewife 	10.8	10.8	10.8	9.7	14.0	14.8
 Pensioner 	24.4	25.2	25.2	22.7	26.5	26.6
 Job seekers 	8.9	8.1	8.1	7.3	5.3	5.1
- Other	3.2	3.2	3.2	2.9	0.7	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 27 – Education of the caregivers (%)

Tut	Tuble App. 27 – Education of the caregivers (76)						
$Q\iota$	alification	2018	2017	2016	2015	2014	2013
_	No qualifications/Primary school	7.3	7.3	7.3	7.3	5.0	5.6
_	Lower secondary school certificate	18.0	18.0	18.0	18.0	27.6	26.9
_	Higher secondary school certificate	49.4	49.4	49.4	49.4	46.8	47.3
_	First cycle degree, Second cycle de-	25.3	25.3	25.3	25.3	20.6	20.2
	gree, Third cycle degree						
Total		100.0	100.0	100.0	100.0	100.0	100.0
A.V.		2,000	2,000	2,000	2,000	2,000	2,000

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

Table App. 28 – Socioeconomic status stated by the respondents (%)

Tuble Tipp. 20 Sociocconomic sia	Tuble Tipp. 20 Sociocconomic status stated by the respondents (70)								
Declared level	2018	2017	2016	2015	2014	2013			
– High	1.0	0.6	9.7	1.9	8.2	8.8			
 Middle-High 	6.3	5.8	26.2	16.1	23.0	22.4			
- Middle	49.9	50.0	46.1	46.1	34.5	33.7			
 Low-Middle 	33.1	33.0	16.1	26.2	23.9	24.7			
- Low	9.7	10.6	1.9	9.7	10.4	10.4			
Total	100.0	100.0	100.0	100.0	100.0	100.0			
A.V.	2,000	2,000	2,000	2,000	2,000	2,000			

Source: survey by Ermeneia – Studi & Strategie di Sistema, 2018

2. The complete list of contents of the 2018 Report

	resentation Barbara Cittadini, National President of AIOP	page]
	Part One THE UNDERLYING VALUE OF THE SYSTEM, INCLUDING SOME CRITICAL AREAS THAT NEED OVERSIGHT		
1.	Average service offerings and the signs of strain as		
	viewed by citizens	>>	13
	1.1. A system seeking to ensure the best possible services		13
	1.2. The tendency of the indicators of the services pro-	>>	13
	vided to increase	»	20
	1.3. A good result also in terms of effectiveness of care	<i>"</i>	30
	1.4. Overall a positive user assessment, albeit slightly de-	,,	
	creasing over time	>>	36
	1.5. A stable Resource/GDP ratio that shows a phenom-		
	enon of underfunding compared to other countries	>>	40
2.	The "funnel" of the waiting lists	>>	48
	2.1. A phenomenon of large numbers of a medium-long		
	waits	>>	48
	2.2. A critical evaluation by one in three people	>>	53

3.	A second "funnel" in the form of Emergency Room		
	services	page	56
	3.1. Access (even multiple) involving almost one in three		
	adult citizens	>>	56
	3.2. An opinion of dissatisfaction expressed by one per-		
	son in four	>>	61
	3.3. The presence of difficulties related to distance and		
	organization of the service	>>	67
4.	A measurement of the efficiency of the system		
	through an examination of the Financial Statements		
	of the Hospital Centers	>>	75
	4.1. Monitoring of the "anomalies" that suggest possible		
	implicit financial statement covering	>>	75
	4.2. An estimate of the impact of inefficiencies on the ex-		
	penditure of public hospital facilities	>>	94
	David Trans		
	Part Two A TREND ANALYSIS OF THE OPINIONS AND		
	EVALUATIONS OF USERS AND CITIZENS		
	EVALUATIONS OF USERS AND CITIZENS		
1.	The change in methods of user access to hospital ser-		
	vices	>>	101
	1.1. A decline in specialist visits, tests and exams com-		
	pared to an increase in admissions and access to the		
	Emergency Room	>>	101
	1.2. A gradual reduction in the use of public hospitals and		
	the level of satisfaction with the relative services	>>	104
	1.3. A growing propensity towards the "active" selection		
	of hospital facilities	>>	108
2.	An option to strengthen citizens' use of accredited fa-		
	cilities, but within the framework of a mixed hospital		
	system	>>	113
	2.1. A greater level of awareness of the opportunities to		
	select between public and accredited private facili-		
	ties, within and outside of the home region, as well		
	as in Italy and elsewhere in Europe	>>	113

	2.2. The increase of admissions in private facilities and the decline in public facilities	page	120
	2.3. Confirmation of the growing satisfaction expressed for accredited facilities over time	»	126
	2.4. The present acknowledgement of a unified public-accredited private system	»	130
3.	The annual set of indicators for the mixed public-pri-		
	vate hospital system	>>	138
	3.1. Indicator of mixed system growth	>>	138
	3.2. Indicator of the level of satisfaction with services	>>	141
	3.3. Indicator of citizens' choice preferences	»	143
	Part Three		
	A PEOPLE WAITING FOR SERVICES:		
	THE EXPERIENCES OF CARE-GIVERS		
	AND INDIVIDUAL PATIENTS		
1.	On the waiting list	>>	149
•	1.1. Reasons, duration and behaviors related to access to	,,	1.,
	ASL services	>>	149
	1.2. Reasons, duration and behaviors related to possible	**	,
	in-hospital stays	>>	158
	1.3. Proposals to improve the situation of waiting lists	**	100
	and experiences with CUPs	>>	164
	1.4. An evaluation of territorial and hospital services	»	176
	1.5. The dual experience of waiting lists and the Emer-		
	gency Room	>>	180
2.	Waits at the Emergency Room	>>	183
	2.1. Reasons, methods of access and behaviors adopted		
	by people and care-givers	>>	183
	2.2. Code assignment, the wait, and the evaluation of the		
	services obtained	>>	190
	2.3. Possible difficulties encountered during the time		
	spent in the Emergency Room	>>	199
	2.4. The results obtained and overall satisfaction levels		

>>

205

with respect to services

	2.5. Emergency Services offered in the territory of resi-		
	dence of the respondents	page	211
	2.6. The use of the Emergency Room as a (quantitative		
	and qualitative) "shortcut" for access to services	>>	218
	2.7. The dual experience of the Emergency Room and		
	waiting lists	>>	222
3.	Postponements and forgoing of care, and the search		
	for alternatives by care-givers	>>	226
	3.1. Lengthy waits, bureaucratic difficulties and fewer		
	services	>>	226
	3.2. Dissatisfaction with public hospital services	>>	232
	3.3. The reactive behaviors put in place	>>	236
	Part Four		
	STATISTICAL INDICATORS		
1.	Facility data	»	245
	1.1. Number of public and accredited private medical in-		
	stitutions	>>	245
	1.2. Bed distribution	>>	246
	1.3. Medical equipment	>>	248
2.	Activity data	>>	260
	2.1. In-hospital days and patient bed occupancy rate	>>	260
	2.2. Types of admissions and discharges	>>	261
	2.3. Prevalent DRGs	>>	262
	2.4. Activities classified according to major diagnostic		
	categories	>>	263
	2.5. Activities classified according to specialty	>>	263
	2.6. Patient mobility	>>	264
3.	Staff information	>>	310
	3.1. Staff fluctuation over the years	>>	310
	3.2. Staff distribution throughout Italy	>>	311
4.	Spending data	>>	317
	4.1. Economic flow trends over the years	>>	317
	4.2. Health expenditure comparisons	>>	318

APPENDICES

1.	Methods applied	page	325
2.	Index of structural tables	>>	363
3.	Detailed tables of the survey on people	>>	368
4.	Detailed tables of the "enhanced" sample of users of		
	waiting lists and/or Emergency Services	>>	400
5.	Detailed tables from the survey of care-givers	>>	438

he Health & Hospitals Report/2018 describes the performance of the Italian hospital system, which is an extremely large organization, numbering more than 1,000 health care institutions, 200,000 patient beds, 8.8 million hospitalizations, 632,000 employees and a total expenditure of EUR 63.1 billion, equal to 55.4% of total public health care spending.

The perspective of the Report has always been characterized by a dual examination, one addressing the users and citizens for whom public health care and social protection was conceived and, one addressing the "machine", in its various components, which exists beneath the banner of a mixed public-private system as envisaged by law and also in the way it is perceived and used by citizens.

This year, on the demand side, attention was focused on two particularly "hot" issues concerning waiting lists, on the one hand, and access to emergency services, on the other. These two experiences involve a significant (and sometimes multiple) flow of people, and affect 38.7% of the adult population for the former and 28.7% for the latter. Problems of "congestion" can thus become manifest causing anxieties, tensions, dissatisfactions and - sometimes inappropriate - alternative behaviors in the use of the Emergency Room, in addition to increasing the out-of-pocket expenses for families. In order to better understand the two areas mentioned, three parallel surveys were conducted on the adult population, on people who have actually experienced waiting lists and Emergency Room services during the last twelve months, and finally, on caregivers.

Parallel to this, on the supply side, an analysis of the "machine" was prepared that measured its average performance levels despite everything, as attested to by the trend of the indicators of the services provided and - for the first time - also by the indicators relating to the outcomes of care as well as the perception of the quality of services by citizens and users. All of this was effected through the annual monitoring of the efficiency of public Hospital Centers by way of examining and making a (multi-year) comparison of the consistency of the items on the Income Statements.

At present we are faced with the opportunity and therefore the need to maintain as best as possible the universal and inclusive objectives upon which our National Health Service is based, and precisely for this reason it is essential to continue to contrast the need to optimize the services provided (and not only on the economic-financial level, but also on that of managing good quality services) with the needs of a demand that is growing quantitatively and is becoming increasingly difficult to satisfy. We need a clear and comprehensible new assumption of responsibility by both parties to help us not merely celebrate the 40th anniversary of the National Health Service, but also to imagine a realistically sustainable profile for the future.

Ermeneia – Studi & Strategie di Sistema is a company that specializes in providing analytical and consulting activities to trade associations and public and private clients, including those operating in the healthcare service sector, who are actively redesigning their presence and operational methods to remain in step with progressive changes in Italy.

AIOP – Associazione Italiana Ospedalità Privata (Italian Association of Private Hospitals) is a trade association that represents private healthcare facilities and hospitals, accredited or otherwise, throughout every region of Italy, which employ just over 70,000, accounting for 11% of the operators of the entire system, who provide hospital services to 15% of patients.

