Ermeneia
Studi & Strategie di Sistema

17

Health&Hospitals in Italy

17th ANNUAL REPORT 2019

COLLANA
Aiop
Associazione Italiana
Ospedalità Privata

FrancoAngeli
OPEN ACCESS

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, Niccolò de Arcayne, Stefano Turchi, Fabiana Rinaldi, Peppino Biamonte, and Nadio Delai (Ermeneia).

Furthermore, an Address Committee has also been created to achieve the project; it is made up of Barbara Cittadini, Gabriele Pelissero and Filippo Leonardi.

We wish to thank the staff at AIOP national and regional offices for their efforts in collecting and organizing data in AIOP's internal system.

Edited by Angelo Cassoni
Translated by Nosmet Soc. Coop. a r.l.

Copyright © 2020 by FrancoAngeli s.r.l., Milano, Italy. ISBN 9788835112747

Ermeneia
Studi & Strategie di Sistema

Health&Hospitals in Italy

17th ANNUAL REPORT 2019

COLLANA
Aiop
Italian Association of Private Hospitals

FrancoAngeli
OPEN ACCESS

 ISBN 9788835112747

Cover image: Andrea Albanese

Copyright © 2020 by FrancoAngeli s.r.l., Milano, Italy. ISBN 9788835112747

Contents

APPENDICES

 ISBN 9788835112747

 ISBN 9788835112747

Note

This text is an abstract of the Report on "Ospedali & Salute", 17th edition 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 2019.

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 17th Report are also provided.

 ISBN 9788835112747

 ISBN 9788835112747

Presentation

by *Barbara Cittadini, National President of AIOP*

The reason for the *Health&Hospitals* Report

"Know in order to decide".

This is the recommendation given by Luigi Einaudi who, decades ago, summarized one of the most forward-looking precepts for anyone having to decide on complex and, above all, important topics for the community.

It gives me great pleasure to open this presentation of AIOP's 2019 *Health&Hospitals* Report with this reflection: it is necessary to know well things for which decisions must be taken and, therefore, to decide not only what to maintain and preserve but also, and above all, what to change and improve.

And this must always be done with the aim of improving the well-being of the community.

This is the case of our National Health Service, which continues, despite all its problems, to be an essential, fundamental and irreplaceable reference of the social structure of this country, and the same which also continues to register critical issues that must absolutely be addressed and resolved.

Precisely for all of the NHS actors to be kept in the know, and thus capable of making informed decisions, AIOP has had this Report prepared by a third party since 2003.

It has been and continues to be a determination of responsibility that, again this year, AIOP carries out for all Italians who are interested in better understanding their NHS.

The *Health&Hospitals* Report has thus, for 17 years now, made it possible to analyze the situation and the evolution of the NHS, identifying its difficulties and problems, outlining possible forms of intervention, in order to allow those involved with planning operations to develop realistic reorganization strategies.

That is why the Report retains all of its importance and validity as an instrument of knowledge, useful for the assessment and direction of the healthcare policy that AIOP, as a privately operated agency of the NHS, makes available to the country.

But it is not only that.

Because, as I have already mentioned, the Report is also useful for those who are simply interested in their country's NHS and want a more detailed understanding of the state of healthcare in Italy.

The situation of the NHS in Italy

Before summarizing the image of the NHS, which, in some ways, takes us back to that described in our 2019 Report, it is important to recall some of its characteristic features.

If the universal and inclusive care features of our NHS are indeed the dual basis on which it was designed and built, and the two peculiar aspects that characterize it, and thus the groundwork upon which every further intervention must be based, it is clear that at present both are in difficulty and are not allowing the system to fulfill its physiological function: that of ensuring prompt, efficient, effective, reliable and scientifically exemplary response to the healthcare demands of Italians.

The reason for this is known to all and can be summarized in one short phrase: the defunding of the NHS.

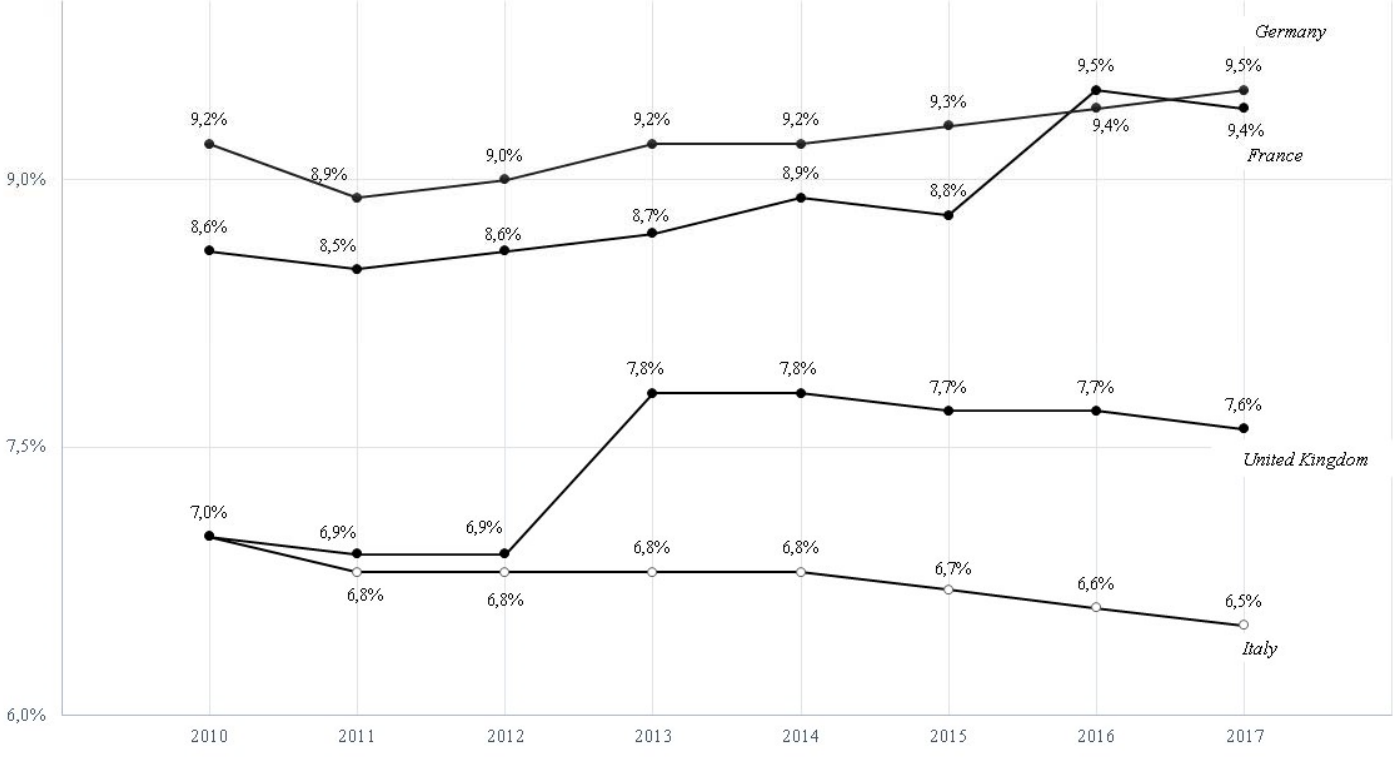
If we look at Italy and compare it to other OECD countries, there is incontrovertible evidence showing us the situation our NHS is in today.

In 2010, Italian healthcare expenditure was 7.0% of GDP, in 2015 it was 6.7%, in 2017 it was 6.5%. While healthcare resources in Italy experienced this decline, the average of the OECD countries of the G7 remained steady at 9.1% over the last three years, and even grew in France (from 8.8% to 9.4%) and also for Germany (from 9.3% to 9.5%) (see Fig. 1).

Finally, if we take into consideration that over the last ten years our country has divested 0.1% of GDP from healthcare expenditure each year, we can get an understanding of the general condition of our NHS.

If only for the record we must report signs of change in public health policy decisions in recent months, even so one remark is incontrovertible: after years of defunding the situation of the NHS is such that it will be a long time before we can go back to saying that our Healthcare System positively satisfies the universal and inclusive care features that formed the basis upon which it was conceived and implemented.

Fig. 1 – Trends in public healthcare expenditure relative to GDP in Germany, France, the United Kingdom and Italy: 2010-2017



Source: *OCSE, Health Data – November 2019*

From a practical point of view, this contextual framework is manifested in a series of "problems" which fall heavily, first of all on the people who use the NHS every day, but also on the facilities that must provide health services, the staff working there, and upon the system in general.

These are well-known situations which cause distorting effects such as the increase in waiting lists, an increase in compulsory medical mobility, difficulty with scientific updating, abnormal Emergency Room access, and the postponement or the forgoing of healthcare services.

This condition also impacts another situation: the change in the social composition of the country, with a progressive aging of the population and the manifestation of the results of an economic crisis whose consequences, despite what has been said, do not seem to be decreasing in intensity.

In this context of constant, progressive and increased defunding of the system, it is important to note the role of the private component of the NHS, which for the most part is represented by AIOP.

Our facilities, however, manage to provide 18.4% of the total number of in-hospital days using only 6.8% of the total public hospital expenditure. These values become 28.4% and 13.2%, respectively, if we consider accredited facilities as a whole (see Fig. 2).

It is clear, however, that the fate of the NHS cannot be entrusted solely to the possibility of integrating its privately-operated component.

Within this framework, the *Health&Hospitals/2019* Report offers further in-depth assessments that expand upon the reflection summarized at the beginning: know in order to intervene better.

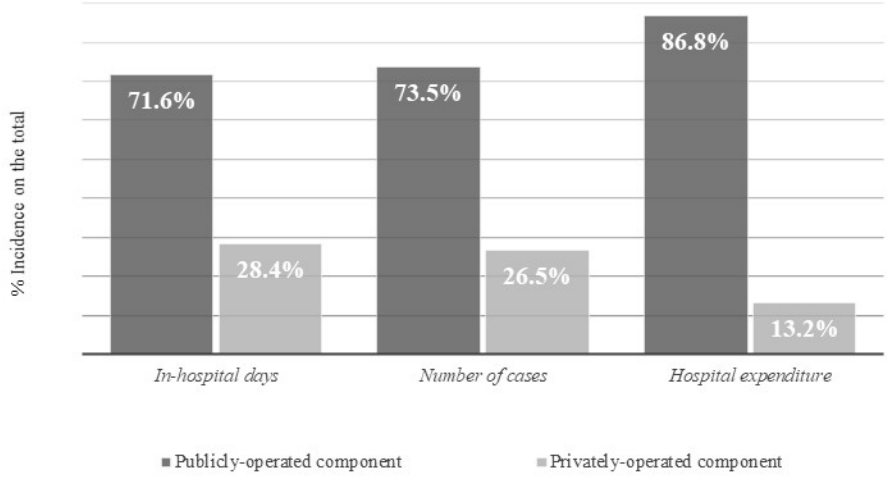
Before mentioning some of the essential aspects described in the 2019 Report, I would like to concentrate on the situation in which the NHS finds itself and on the importance of investing in it once again.

Italy and Italians deserve an NHS capable of meeting their needs and expectations.

Such an NHS should be comprised of both a privately-operated and publicly-operated component in order to truly and concretely respond to the universal and inclusive care nature of the system in which it was conceived and created.

This is a goal that, while, on the one hand, responds to the content of our Constitutional Charter, on the other hand, has encountered difficulty being implemented due to Title V of the Constitution and the organization among the Regions, which has in fact led to the creation of 21 different systems which, among other things, are not capable of providing uniform healthcare services throughout the country.

Fig. 2 – Ratio of public facilities to accredited private facilities in terms of hospital production and expenditure: 2017 (% Val.)



Source*: AIOP processing of SDO data from the Ministry of Health and Agenas*

It is therefore necessary and imperative for the NHS to be overhauled: it is a responsibility incumbent upon all its members, each as regards its own distinctive feature, history, and role within the system.

What the 2019 Report tells us

The 17th edition of the Report delves into the connection between volumes of services, the quality of their provision and results in terms of the effectiveness of treatments, as well as the level of efficiency of services.

Thus the *Health&Hospitals/2019* Report's fundamental theme is an assessment of the capacity of the healthcare facilities and services to achieve an acceptable average level, in terms of quantity and quality, but also in terms of effective distribution in the various territories of the country, as well as within these territories (i.e. in individual facilities and individual services).

It is what the drafters of the Report have defined as the "average level" of the healthcare services.

The information derived from this assessment may be summarized as follows:

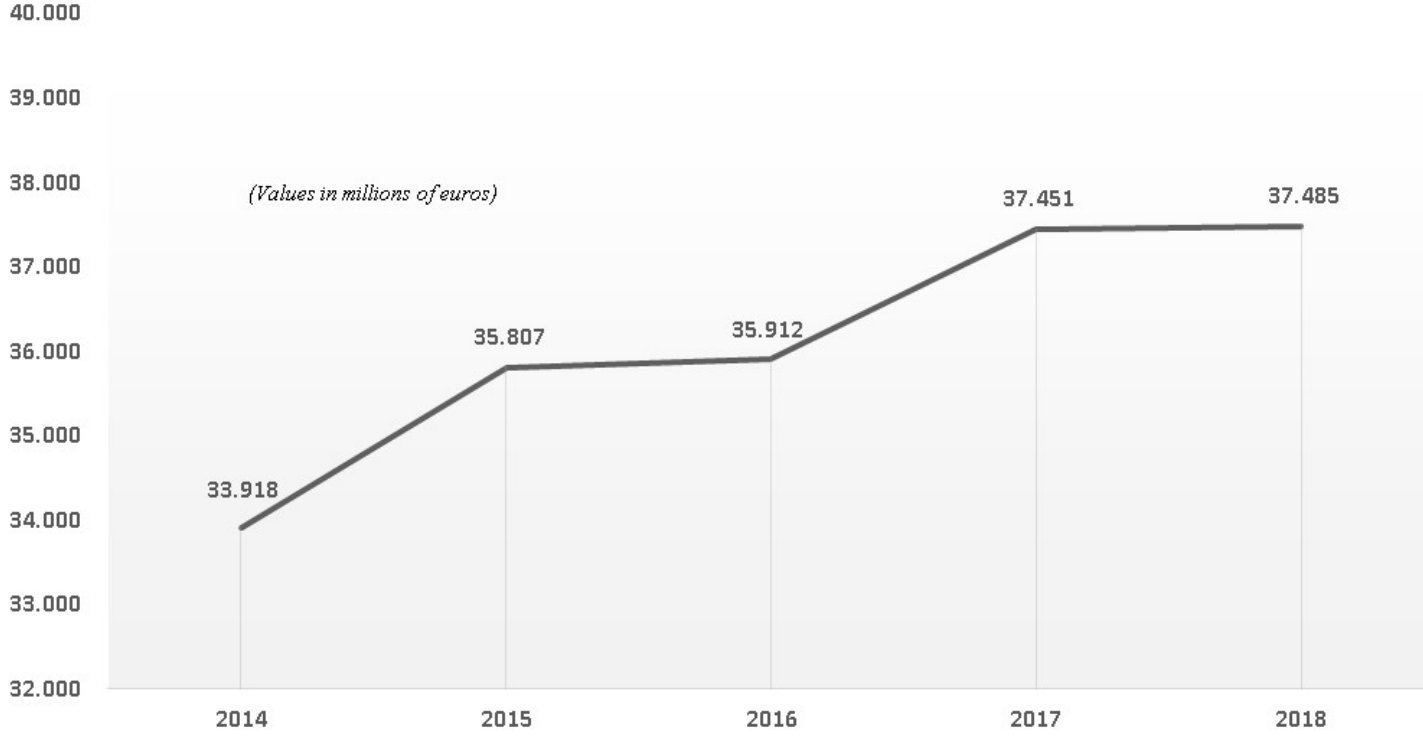
- waiting lists for citizens and the relative times for obtaining services have significantly increased over the last twelve months;
- over the years, the use of *day services* (whether medical-outpatient or surgical-outpatient) has increased, and there has been a decrease in the number of *day hospital* services, which, in turn, had previously made it possible to reduce inpatient admissions for acute care. This was done certainly on account of the need to achieve greater appropriateness of services, but also of the need to reduce costs by "dumping" them onto users;
- problems encountered at the time of access have increased, but also during the stay and, therefore, also in the phase of hospital discharge, due to the difficulties in identifying and accessing the hospital facilities first, and then services during in-hospital stays and long-term care facilities, assisted living homes and in-home care;
- there was a further increase in *out-of-pocket* spending for healthcare services by Italian families, which grew by 10.5% in 4 years (see Fig. 3).

What does all this mean in terms of the "average level"?

Over the last twelve months, this summary parameter has proved unsatisfactory in more than 1/3 of the cases, with particular reference to the use of public facilities; a percentage that becomes 48% in the South.

The *Health&Hospitals/2019* Report confirms and accentuates the situation described last year.

Fig. 3 – Trend of out-of-pocket *healthcare spending over time: 2014-2018*



Source*: AIOP processing of ISTAT data, Household consumption*

A continually increasing trend towards extra-regional healthcare mobility has been detected which, it cannot be denied, tends to penalize less well-off and less educated families, and which is also accompanied by a tendency to postpone and/or forgo services, affecting 12%-17% of respondents in the first case and 10%-14% in the second case respectively, with reference to the total number of potential users who believed they needed the services.

What needs to be done to improve the NHS

If the *Health&Hospitals/2019* Report indicates what has just been summarized, then we must ask ourselves what measures need to be taken in order to honestly begin with the actual reorganization of our NHS.

In this regard, I would like to point out a method of approach to the theme of interventions to improve the health system, which, in my opinion, is fundamental: it is not a question of comparing privately-operated facilities to publicly-operated facilities, or, even, of taking sides in the debate on the future of healthcare in Italy.

Rather, it is important and necessary to place oneself in a synergic collaboration between the actors who act within the NHS, which again is to be viewed as fundamental and essential for the country.

In my opinion, it is necessary to undertake a new phase in the life and dynamics of a healthcare system which must be structurally "mixed", that is, effectively made up of both privately- and publicly-operated facilities and which must utilize the coexistence of these two components to its advantage.

Therefore, I believe we can identify three main areas of action.

First of all, there needs to be **additional investments of resources** to bring the financial structure of Italy's NHS up to the level, at least partially, of those of the other OECD countries belonging to the G/7.

It is evident, in fact, that the balanced and harmonious development of the NHS is hampered by the lack of resources which, however, must be introduced into the system and, in any case, well managed.

Secondly, it is necessary to start a parallel and concretely demonstrated **extreme rationalization of publicly-operated facilities**, with the consequent "freeing up" of economic resources by reducing the areas of inefficiency currently still present.

Thirdly, it is necessary to promote an extensive and well-structured method of **"third party" verification of the results obtained**, both in terms of service management and in terms of results of treatments, connecting everything with a reward system.

If these indeed are the main lines of action for renewing our NHS, then clearly the issue of financial resources is the fundamental one to be addressed.

In this regard, I wish to make note of two circumstances here.

In the 2019 Budget Law (no.145, December 30. 2018, Art.1, paragraphs 514-516) it is possible to increase the funding of the national health needs by signing a specific agreement at the Conference of the Regions for the Health Pact 2019-2021.

This increase, however, can be granted on condition of activating planning measures and improving the quality of the care and services provided, as well as cost efficiency, through the use of a system of objective and measurable indicators.

Secondly, the recently approved amendment to Legislative Decree 95/2012, which provides for the elimination of the 2% annual reduction in accredited healthcare expenditure from that of 2011 starting in 2020, provides useful resources for the contractual renewal of our human resources.

A lot of effort was made to achieve this result, which will help to gratify those operators who provide millions of Italians with responses to their healthcare needs each and every day, thereby contributing to the improvement of the System as a whole.

In the last few years, our facilities have suffered from a spending ceiling, one imposed in fact by Legislative Decree 95/2012, *sine die* (in our opinion unconstitutionally), which, begun as an emergency measure, has in fact transformed into a structural measure, with negative repercussions in terms of the economic and financial sustainability of the facilities themselves.

This situation is strongly inconsistent and in contrast to the change and the increase in the healthcare needs of the population, moreover, compared to spending ceilings unchanged over the years, which has made assistance more complex and also more expensive.

Having said all this, I would also like to point out that the interest in having an NHS that has the ability and the potential to raise the level of healthcare and hospital services to an acceptable and widespread “average level” in the various territories, is shared by all: first of all the citizens, but also by the facilities they operate (both privately- and publicly-operated), and, of course, also by the government which would be able to enjoy an efficient and cost-effective healthcare “machine”.

A proposal

If there has to be a conceptual synthesis to delineate the "ecosystem" within which the 2020 NHS must act, this must needs correspond to the word "collaboration".

I believe that all components of the system should share the burden of helping to rethink the NHS.

The burden must accrue from the awareness of the current complex situation, that described by the *Health&Hospitals/2019* Report, and identify serious reforms and make a real commitment that can be measured and evaluated independently and, consequently, be remunerated with appropriately corresponding fees.

To everything, as already mentioned above, however, the need to restore financial conditions that an NHS of a civilized country like Italy deserves applies.

Beyond the signs of openness by this government, it is impossible to overlook the effects of the protracted defunding of the NHS, effects that this year's Report also describes in great detail.

It is, therefore, necessary to invest more in the NHS, albeit with greater attention to the approach.

Attention must be paid to the spending distribution, but also to the results and efficiencies that can be created.

In all of this, the role of the privately-operated component of the NHS continues to be important and irreplaceable.

We can, with our adaptive capacity and our flexibility, make a significant contribution so that the NHS returns to being truly universal in nature.

This belief is further strengthened today by the elements contained in the Health Pact, as described in *Health&Hospitals/2019* Report and, above all, by the sense of responsibility that must unite the components of the NHS.

AIOP not only makes all of the experience of the facilities it represents available, but proposes that an "Action Committee" for the reorganization of the NHS be activated among the publicly-operated and privately-operated components of the NHS, in order to establish the concrete implementation of the need for constant and honest collaboration.

The main tasks of this committee would be:

- identification of common problems throughout the territory to be addressed;
- the identification of common approaches to deal with them;
- the actual application of the contents of the Health Pact 2019-2021;

– a shared recommendation to the government of the most appropriate healthcare policies, involving not only the increase of available funds but also the method of disbursing and controlling said funds;
– the identification of unacceptable differences and their improbable, albeit gradual, reduction between one territory and another in the country, in the provision of LEAs (Essential levels of care) and services of low and medium complexity. These differences provide the prerequisites for the quantitative waiting lists, from the impoverishment of the system, to the dramatic forgoing of treatment by citizens and, for the more fortunate, the not unexpected mobility, as well as to the improper use of the Emergency Room.

AIOP is ready to collaborate with anyone who cares about the future of a great NHS, which should not be dismantled, but rather safeguarded, preserved and strengthened for the good of the country. It is ready to work concretely with everyone – and there are more than a few – who pursues the same goal each and every day.

 ISBN 9788835112747

Introduction: the maze of the 21 Health Systems

The *Health&Hospitals* Report has from the outset elected to "oversee" the performance of the National Health Service, focusing in particular on the Italian Hospital System by preparing an annual dual assessment, of which:

- the first is that which takes a look at the needs and the demand of citizens and users, for whom the National Health Service was established;
- the second is that which deals with the issue of the services provided by the healthcare "machine" and the relative levels of effectiveness and efficiency of the services.

The 2019 Report focused its attention on illustrating the phenomenon of the many differences that characterize the 21 Regional Health Services, comparing – on the basis of the available data – both the diversity of the services offered and the opinions, evaluations and orientations from a sample of the population, on the one hand, and a sample of *caregivers* on the other: relative comparisons between the objective operating data and that of the subjective data expressed by the two aforementioned samples were made for the whole.

What emerges is a "two-sided" hospital system:

- the first side displays an increase in national average statistics with regard to the complexity and effectiveness of the services;
- whereas the second displays a not-always-satisfactory "average level"[1] of these statistics and of the effective coverage of the territories and of the individual hospital and post-hospital facilities.

Of course the downside, from a territorial point of view, mainly concerns the situation in the South, as confirmed both by the data on the services and

[1] The "average level" describes the ability of services to achieve an average acceptable level of services, not only due to waiting times, access conditions and quality of services, but also the sufficient availability of the services throughout and within the various territories of the country.

at the same time the data on the demand. Although – and it is good to remember – there can be an unsatisfactory "average level" not only with the services but also with the management efficiency levels within the individual Regional Health Services and/or the different territories that make up each individual Region, or even within specific care facilities.

Thus, in proximity to absolutely quality (or even excellent) hospital experiences, there may be others characterized by a modest or even inadequate "average level". It is, therefore, not enough to settle for national statistical average data, nor is it enough to excel in one facility if we are then unable to ensure an acceptable average level and sufficient availability of services and an appropriate management level for the facilities: this would produce and build up 21 different Regional Health Services rather than a National Health Service that is not only established upon but actually is the embodiment of the universal and inclusive principles that inspired the 1978 reform.

The following pages summarize some key phenomena that illustrate what has just been mentioned.

First of all, it is appropriate to reiterate how the average statistical trend of the complexity of the services and that of the outcome indicators improve over time and are accompanied by solid appreciation of the mixed system of public hospitals and accredited private hospitals by citizens.

In fact, the highly complex services provided to acute patients during in-hospital stays increased on average nationally, from 14.4% in 2015 to 14.9% in 2017, for the publicly-operated hospital component and, even more consistently, and with higher values, for the privately-operated hospital component: the latter rose from 18.7% to 21.2% over the same period[2]. This was also true for the outcome indicators (calculated on 28 specific services assessed in 2018), both within public hospitals (for 4 services out of 28) and for as many as 18 out of the same 28, in the case of accredited private hospitals[3].

Furthermore, we cannot fail to note the solid appreciation of the mixed system of publicly-operated hospitals and accredited private hospitals in the opinions of citizens, who in fact say that "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 the necessary specialization, the quality of the services provided, the proximity to their home, and so on"

[2] See Part One /Table 6, p. 33.
[3] See Part One /Table 7, p. 36.

(88.3% agreement among the population sample in 2009 and 87.5% ten years later in 2019)[4].

Not too far from what has just been mentioned – which represents the first side of the Italian hospital system – there is a second side which shows how the incidence and improvement the national average of the complexity of services over time has an "average level" that is not always satisfactory and, at times, is even significantly unsatisfactory.

Suffice it to consider that:

- in 2017 (latest available data) the incidence of the high complexity services is evidently worse in the Regions of the South with a 13.6% compared to 15.1% in the North and 16.7% in Central Italy (in public facilities) and similarly, in relative terms, for accredited private hospitals, with 17.5% in the South compared to 24.8% in the North and 19.7% in Central Italy (albeit with higher incidence and with a more pronounced growth trend)[5];
- in 2019, the sample of *caregivers* interviewed explicitly declared that the "average level" of hospital services in their region, based on the experience they have had over the past two years, has a "poor and/or not-at-all-satisfactory" level of 35.9% nationally for public hospitals and 26.2% for accredited private hospitals: but these percentages increase to 47.8% and 27.3%, respectively, for respondents in South Italy[6].

Moreover, when exploring the reasons for the dissatisfaction on individual aspects, it has been seen that:

- the percentage of the adult population who had one or more experiences with waiting lists increased significantly between 2018 and 2019 both for the services provided by the local health authorities (from 30.7% to 39.2%) and for hospital admissions (from 8.0% to 16.9%)[7];
- and at the same time the percentage of the adult population who actually accessed the Emergency Room one or more times has in turn grown substantially, from 28.7% in 2018 to 39.2% in 2019, while the waiting times also increased from more than 5 and up to 10 hours and longer before being visited (from 20.7% to 32.1%) and for completing any necessary exams (from 39.5% to 50.5%)[8].

Another particularly delicate area is that of the "connection" methods between accesses, stays and discharges from hospital facilities, methods that

[4] See Part One /Table 1, p. 22.
[5] See Part One /Table 6, p. 33.
[6] See Part One /Table 8, pp. 40-41.
[7] See Part One /Table 9, pp. 47-48.
[8] See Part One /Table 10, p. 51.

show a marked deterioration between 2014 and 2019, according to the statements of the *caregivers*, as the following examples illustrate:

- "Not finding reliable information about the hospital, doctors, hospital services, in order to choose the most appropriate facility" was true for 29.7% of the respondents of the national sample in 2014 and 45.1% in 2019, but 56.3% in South Italy[9];
- "Being placed temporarily, though not for brief periods, on beds in the corridor while waiting for a place in the ward to open up" was an experience for 12.9% of the interviewees in 2014, but for 34.3% in 2019, and for 39.6% in South Italy[10];
- "Noting that there is no good discharge procedure or for appointments that arise from the use of post-hospitalization services, being left to fend for themselves" was true for 31.0% of respondents in 2014, but 44.5% in 2019, and for 54.2% in South Italy[11];
- in particular, experiences with rehabilitation facilities generated significantly great annoyance among the *caregivers*, who, for example, stated that "the hospital stay was too short compared to the needs of the patient" (58.2% nationally, but 73.4% in the South); or, who, also stated that "no aid was received for the handling of the bureaucratic procedures, for the recognition of invalidity status and for the access to the provisions of Law 104 by the hospital or the rehabilitation facility that discharged the patient" to the extent of 58.6% of those interviewed nationally, but 80.5% of those residing in South Italy[12].

The dissatisfaction declared specifically for the services experienced reflects the lack of an "average level" of the same. Thus, for example[13]:

- dissatisfaction with the last hospital services received over the last twelve months by actual users, was true in 23.3% of cases for public hospitals (but 31.6% of those in the South) and for 9.1% of accredited private hospitals (but 22.3% in the South);
- or peoples' dissatisfaction with the Emergency Room, again taking into account the last experience over the last twelve months, was 29.0% of respondents in 2018, which rose to 37.5% in 2019 (with the corresponding values for the South being 37.9% and 45.9%, respectively).

As is quite logical, dissatisfaction and the search for solutions deemed better for the patient or the lengthy wait for services push the *caregivers* to

[9] See Part One /Table 12, pp. 59-60.
[10] Ibidem.
[11] Ibidem.
[12] See Part One /Table 13, pp. 62-63.
[13] See Part One /Table 14, p. 71.

seek out alternative solutions both inside and outside of their home Region, and to look for alternative facilities and services (whether public, accredited private, or completely private).

By way of example, here are some of the behaviors witnessed:

- 36.8% of people placed on waiting lists for local health authority services in 2019 (compared to 30.6% in 2018) did not wait for their turn and instead sought alternative solutions in public, *intramoenia*, accredited private, or completely private facilities[14];
- similarly, 57.3% of people on waiting lists for serious health issues and 42.9% for mild health issues in 2019 did not wait their turn for hospital admission, compared to an overall average of 31.1% in 2018, and rather opted to go to other hospitals, whether public, accredited private, or completely private both inside and outside of their home Region[15];
- again in 2019, 21.4% of the population interviewed would, in the event of a serious and/or urgent health problem, prefer to go directly to the Emergency Room rather than to use local health authority services[16];
- finally, there was greater *out-of-pocket* spending among households, which in fact increased by 10.5% between 2014 and 2018, amounting to EUR 37.5 billion[17].

A particularly significant behavior is that of extra-regional healthcare mobility, a phenomenon that is in contrast with the overall trend of hospitalizations at the national level. In fact, the latter have registered a 25.9% decrease over the last ten years, while hospitalizations in other Regions other than the home Region rose from 7.4% in 2009 to 8.8% in 2018.

But this last national average (corresponding to 726,000 units) is 12.2% for the Regions of the South, equal to 42.8% of the total extra-regional hospitalizations at the national level[18].

The passive mobility phenomenon affects to a greater extent those Regions which are or have been subjected to debt rescheduling plans. Passive mobility flows for these Regions, again in 2018, amounted to almost 440,000 units, equal to more than 60% of the 726,000 extra-regional hospitalizations nationally.

However, there is a strong (though not exclusive) overlap between Regions with debt rescheduling plans and the Regions of South Italy, as shown in Figure 1, which highlights the balances of the healthcare mobility flows

[14] See Part Two/Table 23, p. 157.
[15] See Part Two/Table 26, p. 163.
[16] See Part Two/Table 39, p. 186.
[17] See Part One /Table 8, p. 41.
[18] See Part One /Table 8, p. 40.

entering and leaving in thousands of units. At the basis of these flows there is certainly the propensity of patients to move to other Regions to receive highly complex services, but this is a reactive attitude also linked to the level of trust attributed to the *performance* of the health systems of the home Region and the difficulties to access even medium and low complexity services in a reasonable time.

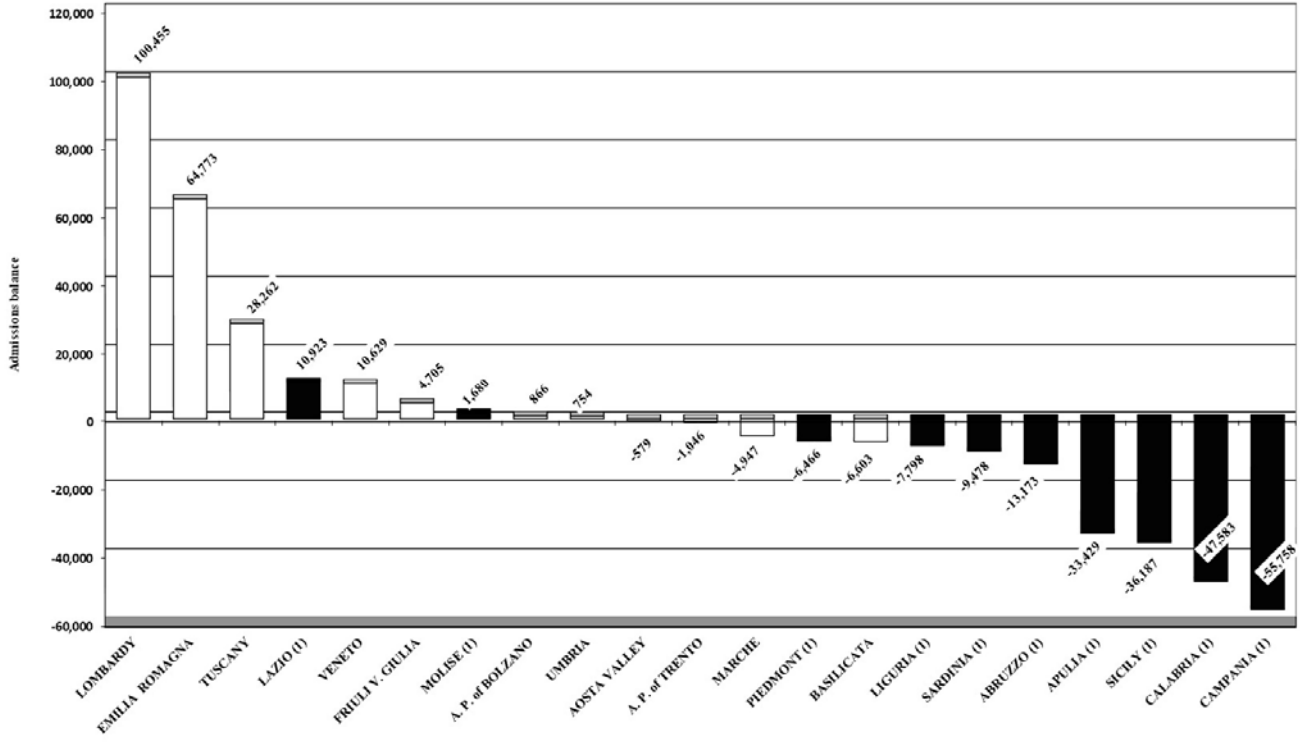
With reference to the calculations carried out on the interregional mobility matrices (taken from the 2018 SDO Report of the Ministry of Health), the amount of expenditure quantified at EUR 4.6 billion corresponds to the 726,000 extra-regional hospitalizations: fueled by all the phenomena mentioned so far which range from the length of the waiting lists to the lack of trust in the facilities present in the home Region, the lack of specializations deemed fundamental for the patient and to the anxiety of finding answers that may be better or perceived as such (and not only, precisely, for serious health issues but also for medium or low complexity matters).

Moreover, the propensity to seek extra-regional hospitalization solutions, as seen in the statements of the *caregivers*[19], shows an evident growth trend over time as illustrated by the following data, which once again underline a greater propensity by respondents from the South and the Islands:

	2016	*2019*	
		Total	*South and Islands*
– The propensity over the last 12 months to resort to hospitals in other Regions compared to the home Region by the *caregivers* and/or other family members			
▪ Inclination to actually make use of extra-regional hospital facilities	10.1	12.4	17.5
▪ Inclination to potentially make use of extra-regional hospital facilities, as they have evaluated and/or might evaluate this possibility	18.1	39.6	42.4
▪ The issue did not arise	71.8	50.1	48.0

[19] See Part Three /Table 21, p. 245.

Fig. 1 – Interregional mobility balances – Total typologies and admissions. Year 2018



(1) The Regions that are or have been subject to a debt rescheduling plan.
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 2018*

Again from the 2019 *caregivers* surveys statements were collected regarding their tendency towards extra-regional mobility, but this time as it related to rehabilitation and/or long-term care facilities, for which the observations made for healthcare mobility in the strict sense, including the strong predisposition of the South compared to the national average, as the following data show[20]:

– Behaviors and orientations of *caregivers* regarding the use of rehabilitation and/or long-term care facilities in Italian Regions other than their home Region:	*Rehabilitation Facilities*		*Long-Term Care Facilities*	
	Total	*South and Islands*	*Total*	*South and Islands*
▪ Effective use of extra-regional facilities or at least a willingness to do so	40.4	58.1	47.3	66.2
▪ Did not make use of extra-regional facilities though they were willing to do so due to the expenses to be incurred for the transfer of family members + Did not make use of extra-regional facilities but, if there was a need, would evaluate the possibility	22.1	35.8	20.8	29.0
▪ Did not make use of extra-regional facilities because they were not informed of this possibility + Regional facilities were sufficiently adequate	50.2	36.5	37.5	26.7

Finally, among the possible alternative behaviors, mention should be made of postponement and/or forgoing of tests and/or treatments, which show a clear and unequivocal tendency to grow over time, due mainly – in the first place – to the length of the wait to get the desired service[21].

The overall Italian Health and Hospital System situation is thus a rough sketch of a national statistical average that is experiencing an upswing in the face of an often inadequate or declining "average level" of services: with territorial differentiations, especially among the southern regions compared to the rest of the country, though also at points within individual local situations. Naturally, in all of this, several processes have played (and play) a role, of which at least three are particularly important.

The first is the defunding process which has been gaining momentum over time, placing Italy at the bottom of all OECD countries: presently Italian public healthcare spending is equal to 6.5% of GDP, and has been steadily decreasing over the years to well below the average of the aforementioned countries (7.5%), and even lower when considering the situation in Germany (9.5%) or France (9.4%). And to this it should be added that these percentages have been calculated over the years on an Italian GDP in decrease and

[20] See Part One /Table 13, p. 63.
[21] See Part One /Table 8, p. 41.

then in very slight recovery, unlike the other national situations. The result, especially for the Regions under compulsory administration (but not only), has been that greater control/reduction of spending was achieved which, however, resulted in a sort of rationing of the services provided, the public facilities having failed to carry out a parallel restructuring and reorganization of services.

The second process concerns the progressive under-financing of the accredited private facilities, which has taken the form of an *explicit reduction of DRG rates*, beginning with the Balduzzi Ministerial Decree of October 2012, to which are added the mechanisms of the "ceilings" to the services, the fee scalebacks and the adjustment (mostly below) of the DRG rates by the individual Regional Health Services. Also there is an *implicit rate reduction* if we bear in mind that the recognition of the aforementioned DRG services for the accredited private facilities includes the capital expenditures and the related depreciation (estimated overall at around 10%-13% of the aforementioned rates), while very different methods are reserved for public facilities through the recognition of ad hoc loans. Furthermore, it is necessary to take into account the trend of inflation which, in the period 2011-2018, can be estimated at around 7.0%, to which must be added the 2% reduction in overall 2011 appropriations for accredited private facilities, a percentage that has remained in force throughout 2019. The result is that the entirety of explicit and implicit reductions can be estimated at around 19%-22% of the DRG amount, to which are added the conditioning (mostly downwards) of the rates charged by the individual Regional Health Services[22].

The third process has to do with the difficulty public hospitals have effecting changes to their organization and management, which leads to the persistence of significant areas of inefficiency as illustrated by the monitoring of the Financial Statements of the Italian Hospital Centers over the last 5 years[23], with the consequence of them not being able to "free up" public resources to be reinvested in terms of improving services for patients.

Finally, it should be said that the all of the phenomena mentioned certainly does not originate only from the last year examined (2019), but rather represents a trend that has gradually accumulated over time, which has helped to generate (often accentuate) the differences between one Regional Health Service and another: there is certainly a particularly difficult situation for the South compared to the Center-North, but also with internal differences in each individual Regional Service.

[22] See Part One /Table 19, pp. 79-81.
[23] See Part One/Section 3.3, pp. 86 et seq. (and in particular see the related Tables 22-25).

For this reason, the risk (and often the reality) of the formation of 21 Regional Health Systems has been underlined, as these offer health protection and assistance responses which differ greatly between them with respect to their citizens.

If the continuous increase in the needs and expectations of patients is added to the processes just mentioned, it must be noted that today a realistic rewriting of the Pact between the State and Citizens on the subject is in order. The Cognitive Maps of the past are now completely inadequate, not only for interpreting the present, but even more in order to plan out the future of a system that intends to preserve the substance of the universal and inclusive principles on which it is based.

Part One

The difficult pursuit of the average level of healthcare and services

 ISBN 9788835112747

 ISBN 9788835112747

1. A "two-sided" system

1.1. A structured outline of the mixed hospital system made up of public and accredited facilities, accompanied by a sound awareness of its value by citizens

Italy's National Health Service performs well on average statistically compared to the Health Services of other countries. Nevertheless, it has to be mentioned that there are weaknesses in the organizational structure of the healthcare system as well as the quality of the services, depending on the territories, the size of the cities in which people live and, of course, the cultural and social make up of people, which can either help or hinder the ability to access and make the best use of the services. This does not mean that the National Health Service is lacking in absolutely (and indeed there are many) excellent institutions that have achieved recognition as such nationally and internationally.

The complex and articulated framework just mentioned exists within a process that for some time now has tended to restrict public economic resources, and additionally has experienced personnel problems due to the retirement of operators and the parallel hiring freeze that has now lasted more than ten years: all of this is accentuated by the recent early retirement measures which wind up (and will wind up) by further weakening the healthcare system and causing a decline in the quality of services. This will contribute to causing differentiation at the territorial level (and even within the same territory) in terms of the quantity and quality of the services themselves.

The entire Italian hospital system – and it should be kept in mind – is therefore configured as a mixed system in which there is a public hospital component (comprised of different types of institutions) and at the same time there is a private component (itself comprised of different types of accredited

hospitals): the whole constitutes the aggregate hospital system which Italian citizens can enjoy without any costs to the patients. The accredited hospital component certainly cannot be defined as marginal if we consider that it provides 28.4% of in-hospital days and accounts for the proportionately smaller investment of 13.2% of total public hospital expenditure.

Yet, we would do well to be even more precise and to recall that when talking about accredited hospitals, we are referring to an extremely complicated type of complex indeed.

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 (76.8%). 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, which together account for another 10.0% of current public hospital expenditures.

The above facilities are augmented by accredited hospitals, private university polyclinics, private IRCCS and religiously-affiliated classified hospitals. These make up the remaining 13.2% of the current National Health System hospital expenditures.

In 2017 (latest available data), there were a total of 188,748 patient beds (a decrease of 2.2% compared to the previous year), 69.5% (131,235 units) of which were located in public hospitals and 30.5% (57,513 units) of which were located in accredited private hospitals as a whole (Fig. 1). The comparison between the two sets of patient beds shows how the hospital system essentially assumes the characteristics of a mixed system (indeed one that is recognized and regulated by Legislative Decree 502/1992), one in which the public facilities are more numerous but whose accredited component is also significant (Fig. 1).

Public and accredited hospital facilities total 997 (2017), (-3.6% compared to the previous year) with the latter being greater in number (56.5%) than the former (43.5%). However, the concentration of the two types of facilities differs with respect to geographical areas, as shown by the following data taken from Figure 1 below:

Distribution % of public hospitals	*Distribution % of accredited hospitals*
1st place: South and Islands (48.6%)	1st place: North Italy (42.3%)
2nd place: North Italy (29.3%)	2nd place: South and Islands (37.3%)
3rd place: Central Italy (22.1%)	3rd place: Central Italy (20.4%)

If we compare the number of hospitals and the number of patient beds (again for 2017), we can see more detailed information as the chart below shows: with the average number of patient beds in public hospitals always higher than in accredited hospitals and decreasing, going from 535 in the North to 251 in Central Italy, and to 185 in the South and the Islands. The decrease in the average number of patient beds also applies to accredited hospitals as they descend from the North to the South and the Islands, albeit with a significantly lower average number of patient beds compared to public facilities.

Geographical distributions	*Public hospitals 2017*			*Accredited hospitals as a whole 2017*		
	No. of hospitals	*No. of patient beds*	*Patient beds No. of hospitals*	*No. of hospitals*	*No. of patient beds*	*Patient beds No. of hospitals*
North	127	67,999	535	238	26,983	113
Center	96	24,111	251	115	12,157	106
South and Islands	211	39,125	185	210	18,373	87
Total	434	131,235	302	563	57,513	102

Figure 2 depicts aspects relating to in-hospital stay flows and spending flows for the year 2017 (latest available data).

With regard to in-hospital days, it should be mentioned that these have gradually decreased over time, from 58.7 million in 2017 compared to:

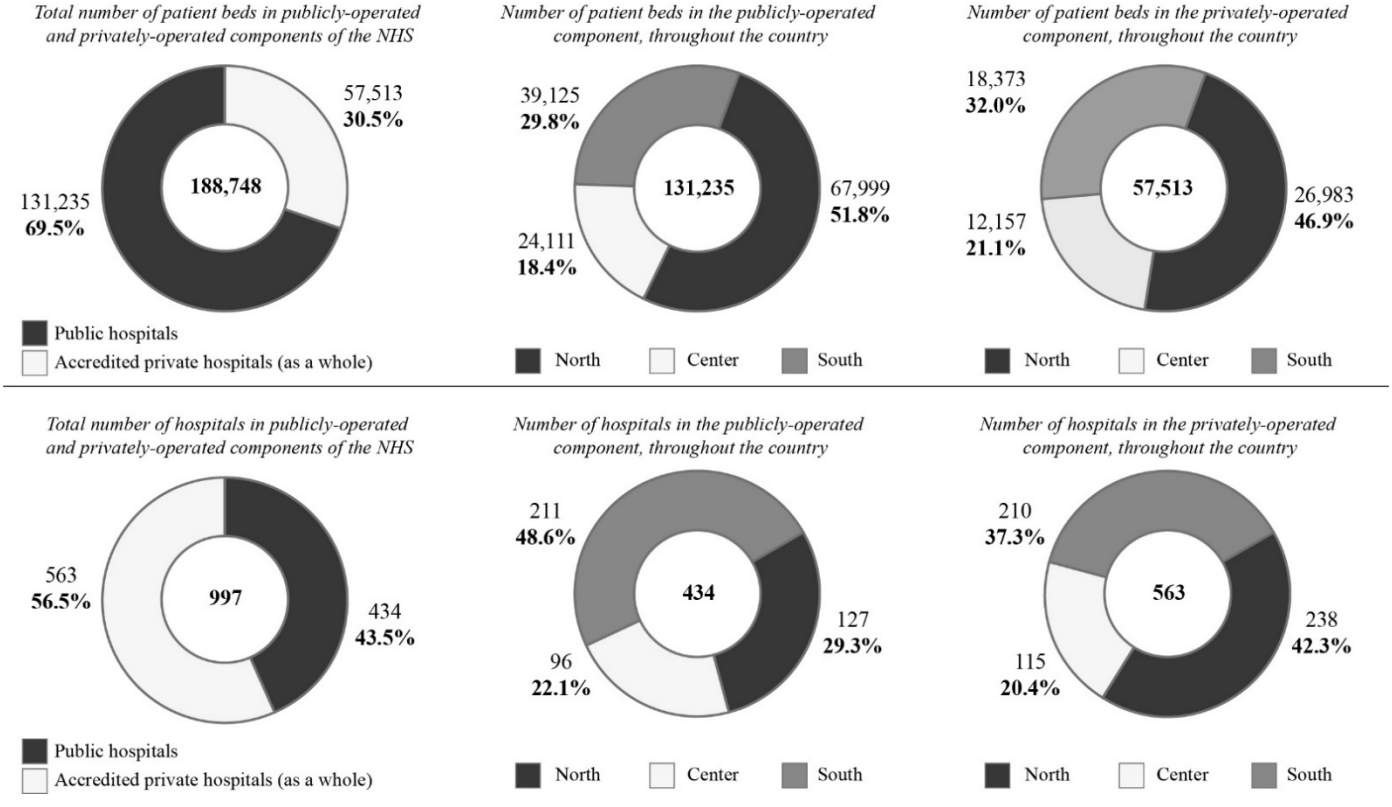
- 59.9 million for the year 2016;
- 61.2 million for the year 2015;
- 61.8 million for the year 2014;
- 62.9 million for the year 2013;
- 65.2 million for the year 2012;
- 67.9 million for the year 2011.

As can be easily calculated, there was a 13.5% decrease over six years, in keeping with the impetus towards fewer in-hospital stays for patients that the National Health Service has promoted in recent years.

Again, in 2017 71.6% of these in-hospital days were in public hospitals and the remaining 28.4% were in accredited hospitals as a whole.

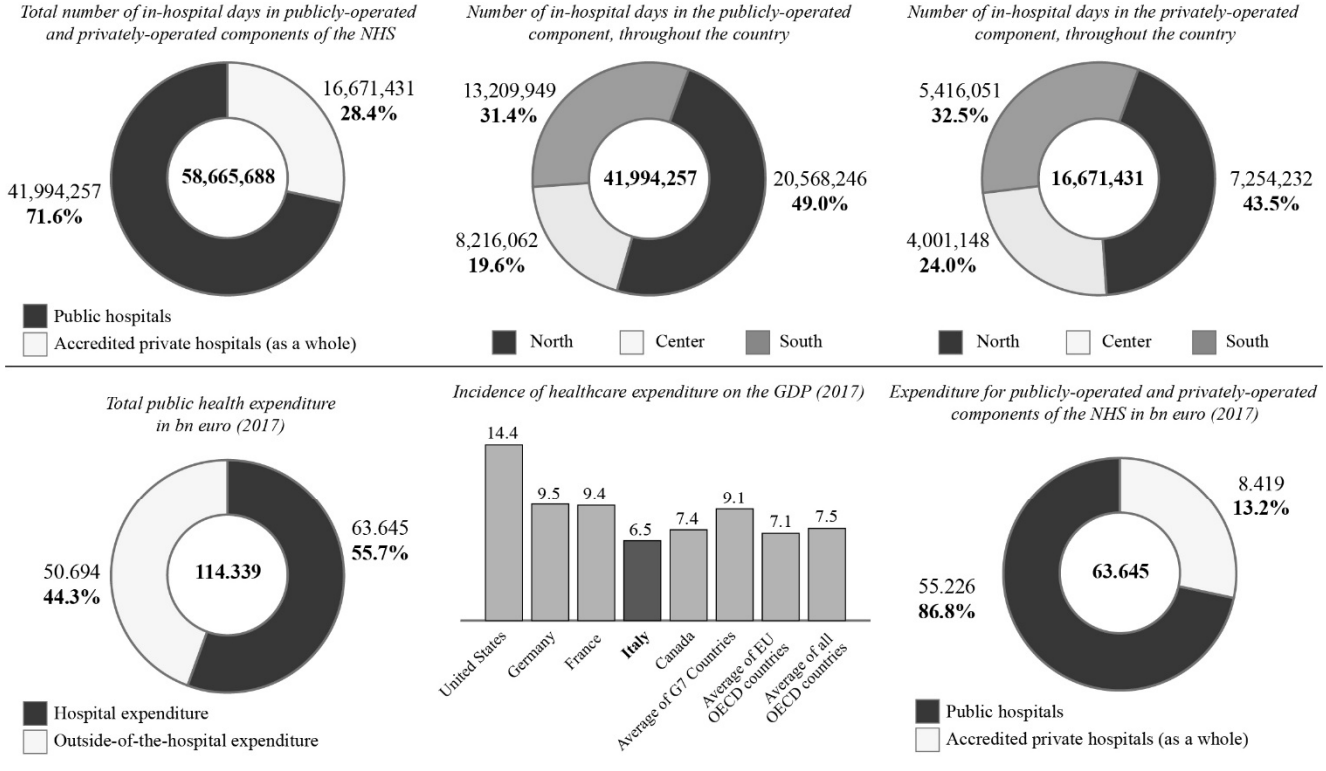
The distribution of in-hospital days, for both the types of structures mentioned, shows a decreasing order of magnitude which places those concentrated in the North in first place, followed by those in the South and the Islands and by those of Central Italy. The following chart provides a detailed comparison:

Fig. 1 – Executive summary of the aggregates of the Italian hospital system: patient beds and institutions (2017)



Source: data processed by Ermeneia – Studi & Strategie di Sistema, 2019

Fig. 2 – Executive summary of the aggregates of the Italian hospital system: in-hospital days and expenses (2017)



Source: *data processed by Ermeneia – Studi & Strategie di Sistema, 2019*

Geographical Areas	*Percentage distribution of in-hospital days in public hospitals*				*Percentage distribution of in-hospital days in accredited hospitals as a whole*			
	2014	*2015*	*2016*	*2017*	*2014*	*2015*	*2016*	*2017*
North	52.3	51.4	48.8	49.0	46.6	47.7	42.7	43.5
Center	18.0	18.7	19.3	19.6	22.9	23.0	23.5	24.0
South and Islands	29.7	29.9	31.9	31.4	30.5	29.3	33.8	32.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

As can be seen over the past four years, the concentration of in-hospital days tends to decrease in the North but to slightly increase in Central and South Italy: and this is true both for public facilities and accredited facilities.

If we look instead to the flow of resources (see the second part of Figure 2) we can see that:

a) total public health expenditure, equal to EUR 114.3 billion in 2017, flows – as usual – more to the hospital component (55.7%) compared to the non-hospital component (44.3%). It should be recalled that the incidence of public hospital spending out of total public health expenditure fluctuates around the value just mentioned and saw slight growth from 54.5% in 2011 to 55.7% in 2017;
b) the amount of public health expenditure out of GDP places Italy on a decidedly lower level (6.5%) in 2017 compared to the average of the OECD G7 countries (9.1%) and, in any case, also lower than the average of the total OECD countries (7.5%) and the average of OECD countries in Europe (7.1%). It should also be mentioned that Italy not only had the lowest amount of public health expenditure out of GDP, as just mentioned, but also had to deal with a decrease in GDP during the toughest years of the economic crisis (thereby obtaining a doubly negative result in the expenditure/GDP ratio, since the absolute values of both decreased).

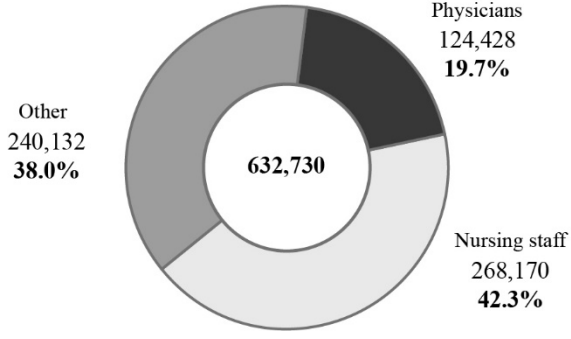
Finally, Figure 3 provides an overall idea of all the human resources that conduct their activities within the mixed hospital system between public and accredited hospitals. Unfortunately, the latest data available dates back to 2013. The total number of employees at the time was 632,730, a drop of -2.1% from 2010. Of this, 19.7% was made up of physicians (124,428 units), 42.3% was made up of nursing staff (268,170 units) and finally, 38.0% comprised the remaining personnel (240,132 units).

The distribution of personnel throughout the country shows – approximately – the weight of hospital activities in the North (52.1%), followed by the South (27.4%) and finally by Central Italy (20.5%).

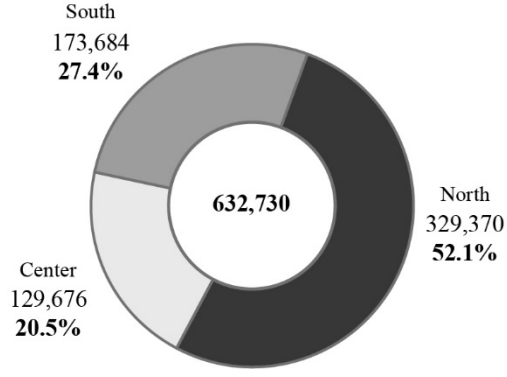
The observations made so far derive have come from analyzing objective data (number of public and accredited hospitals, number of respective patient

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

Total number of the professionals in public and private hospital components of the NHS



The distribution of total professionals, throughout the country



Source: *data processed by Ermeneia – Studi & Strategie di Sistema, 2019*

beds and in-hospital days, public expenditure for the two types of facilities, and number of employees) which provides an idea of the complexity of the "actual" hospital services.

At this point it becomes logical to ask what the subjective perception by citizens and users is, as well as how they behave towards the above mixed system which has become part of the collective culture.

Table 1 shows the responses of the people interviewed year by year and grouped on a biennial basis, with reference to the period 2009-2019. These are the opinions and evaluations provided by citizens and users on the subject in question.

The opinions provided by citizens on the mixed public-accredited hospital system give a fairly precise idea of how socially "entrenched" this system is. In fact, "strongly + somewhat agree" opinions well exceed 80%:

– both with regard to the awareness of being able to use accredited hospitals as part of the overall hospital system, since when one must be hospitalized, one does not consider the type of facility but rather the presence of the specialization that the patient needs, the quality of the services, and the proximity to home: the level of agreement for this ranges from 88.3% in 2009 and – except for some intermediate fluctuations – remain more or less around the same figure, to 87.5% in 2019 (these fluctuations should be assessed as a normal process that may be attributed to the entry and exit of the younger generations who, compared to their elders, still need to "learn" how to properly and practically exercise their options);
– and as regards the suggestion, addressed to the National Health Service, of making better use of all the hospital facilities in the area (public and accredited) in order to allow citizens to choose what best fits their needs, according to abilities and opinions (ranging from 84.0% in 2009 to 87.9% in 2019);

and as regards the request addressed to the Regions and the local health authorities to promote appropriate information campaigns directed at citizens in order to encourage the effective free choice of hospital facilities, given that little is known about the opportunity for admissions at accredited hospitals at no additional cost to the patient (ranging from 84.3% in 2009 to 80.8% in 2019).

Moreover, a comparison of the "strongly agree" and "somewhat agree" opinions shows how the former have grown in a more pronounced manner over the decade, whereas the latter tend to decrease: in short, there is an increasingly marked awareness of the mixed system and of a consequent (necessary) communication policy and active integration of the various facilities by the government.

The average positive perception values for the mixed hospital system contained in Table 1 obviously become more pronounced compared to the overall average of the sample for respondents residing in the North compared to the rest of the country, as it does for people living in medium and, especially, large cities, for females compared to males (also because women are more often in the role of *caregivers* for the whole family), as well as for respondents with an average or above-average level of education and, more generally, for those who are self-employed within the upper-middle and upper social classes[1].

While it is important to pay attention to how the mixed system is viewed positively, it is also necessary to go further in depth on the specific knowledge and even the behaviors actually practiced by users over the last twelve months. The data collected for this is displayed in Table 2, which shows how:

a) a "clear" understanding of the provision that allows use of both public and accredited hospitals without costs to patients has increased from 35.5% in 2009 to 40.2% in 2014 and, finally, to 41.0% in 2019: as a consequence, the number of citizens with only a "vague idea" of this opportunity dropped from 43.1% in 2009 to 36.1% in 2019;
b) the full awareness of citizens of the ability to go to hospitals outside their home region for treatment also rose from 31.9% in 2009 to 36.7% in 2014, and to 34.5% in 2019: again in this case, the amount of respondents who "seem to recall" this opportunity decreased (dropping from 41.5% in 2009 to 36.4% in 2019);
c) similarly, awareness of the opportunity to be able to seek healthcare-hospital services at facilities in the various European Union countries went from 14.1% in 2013 (when the EU Directive became operational) to 19.1% in 2016 and 20.5% in 2019: but, in this case, vague awareness also grew, given the relatively more limited period of the entry into force of this law (increasing from 29.1% in 2013 to 32.2% in 2019);
d) in turn, the behaviors – this time of the actual users who took into consideration the various choices over the last twelve months – extended further to display a particularly pronounced evolutionary dynamic (also due to the fact that when decisions have to be made on account of a concrete need, more and better information is sought), increasing from 21.2% in 2009 to 24.7% in 2014, and winding up at 38.1% in 2019;

[1] See *Table A2/Sample population, Section 3 of the Appendices.*

Table 1 – The positive perception of a mixed public/accredited hospital facilities among citizens (Opinions expressed by citizens not including "do not know" answers)" (%)[1]

Phenomena	*2009*	*2011*	*2013*	*2015*	*2017*	*2019*[2]
"The accredited 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 the necessary specialization, the quality of the services provided, the proximity to their home, and so on"						
– Strongly agree	26.9	31.8	25.1	25.4	25.2	31.2
– Somewhat agree	61.4	56.8	57.3	57.0	60.7	56.3
– ***Strongly + somewhat agree***	***88.3***	***88.6***	***82.4***	***82.4***	***85.9***	***87.5***
"The government should make the best use of all the hospitals in the area (public and accredited), in order to allow citizens the best possible choice according to their needs, opportunities and opinions"						
Strongly agree	30.2	42.3	42.5	42.5	39.2	45.0
Somewhat agree	53.8	47.8	45.3	45.7	47.5	42.9
Strongly + somewhat agree	***84.0***	***90.1***	***87.8***	***88.2***	***86.7***	***87.9***
"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 hospitals offer"						
Strongly agree	24.0	24.2	20.3	26.7	20.6	29.5
Somewhat agree	60.3	56.1	56.8	53.0	57.1	51.3
Strongly + somewhat agree	***84.3***	***80.3***	***77.1***	***79.7***	***77.7***	***80.8***

(1) For data up to the year 2018 see Table 9/ Part One, p. 38 of the *Health&Hospitals Report/2018* (data are net of missing responses).
(2) See Part Two/Table 14, pp. 134-135.
Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table 2 – The growing awareness of the different choices of hospital facilities available as a concrete exercise of freedom of choice within the current mixed system of public hospitals and accredited hospitals (% val.)

Phenomena	*Data*			
– Awareness among Italian citizens of the provisions that permit the use of both public and accredited hospitals[1]:	*2009*	*2014*	*2019*	
▪ Yes, very clear	35.5	40.2	41.0	
▪ Yes, but a little uncertain	43.1	38.8	36.1	
– Awareness among citizens of the opportunity to seek treatment in hospitals outside of their Region[2]:	*2009*	*2014*	*2019*	
▪ I am perfectly aware of this	31.9	36.7	34.5	
▪ I seem to remember that is a possibility	41.5	39.1	36.4	
– Awareness among citizens of the opportunity to travel for healthcare and hospital services at facilities in different European Union countries[3]:	*2013*	*2016*	*2019*	
▪ Yes, I am aware	14.1	19.1	20.5	
▪ Yes, I've heard of it	29.1	33.3	32.2	
– Percentage of users who took into consideration the various choices (among public, accredited hospitals or paid private clinics) in the last twelve months[4]:	*2009*	*2014*	*2019*	
	21.2	24.7	38.1	
– Trend of the AIOP Index 3, concerning the value perceived by citizens and users of the free choice of the hospital facility deemed most appropriate, within the current mixed system of public facilities and accredited facilities[5]:	*2009*	*2013*	*2017*	*2019*
	585.6	599.0	615.6	650.7

(1) See Part Two/Table 7, p. 121.
(2) See Part Two/Table 8, p. 121.
(3) See Part Two/Table 9, p. 123.
(4) See Part Two/Table 5, p. 116.
(5) See Part Two/Table 18, p. 149. The Index is intended to illustrate citizens' behaviors and orientations towards the current mixed system of public hospitals and accredited hospitals: this Index is the result of a combination of 7 different components that range from the levels of awareness of choices to the their concrete use, up to the related consolidation and development policies of this system.

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

e) finally, there is a summary indicator that has been specially prepared for the *Health&Hospitals* Report for a long time now (AIOP Index/3), which quite clearly shows the increase in the perceived value among citizens and users of the importance of being able to freely choose the hospital facility they deem most appropriate from among the public and accredited ones: this indicator[2] in fact, rose from 585.6 in 2009 to 650.7 in 2019, and maintained steady growth over the past ten years.

It is quite understandable how the level of awareness of the ability to choose as well as the choices actually made between public facilities and accredited facilities is more pronounced for the respondents who reside in larger cities, for females compared to males in the sample and, especially, for those with a certain level of education and who belong to the upper-middle or upper social class.

1.2. Growth of the complexity and effectiveness of hospital services, though with an (objectively) unsatisfactory "average level"

It was mentioned in the section 1.1 above how the National Health Service *performs* well on average statistically compared to the Health Services of other countries: this is confirmed by the constant improvement of the complexity and effectiveness of the services provided.

Two basic indicators are used to measure the average levels of these services – as in the past – that of the *average weight* and that of the *case mix*.

If we consider the *average weight*[3] we can compare the services of public hospitals to those of AIOP accredited hospitals, which shows that (Table 3):

[2] See Part Two/Table 18, p. 149.

[3] 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:

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

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.

a) the national average indicator for public institutions and accredited hospitals has continued to rise over the years indicated: even if for the first type of facility, it went from 1.20 in 2014 to 1.21 in 2015 and then rose again to 1.23 in 2016, remaining at the same value in 2017; whereas for the second type of facility growth is more marked, going from 1.28 in 2014 to 1.32 in 2015, to 1.35 in 2016 and to 1.36 in 2017 which, however, was 1.37 for 2018 (inasmuch as data was also available for the last year);
b) then, if we look at the 2017 indicators Region by Region, we can see that the facilities that manage to find a place in the public sector above the national average (*Average weight*: 1.23) are, in descending order:
   – Tuscany (1.36);
   – Piedmont (1.33);
   – Marche (1.29);
   – Friuli Venezia Giulia and Liguria (1.27 for both);
   – Emilia Romagna and Basilicata (1.25 for both);
   – Veneto and Abruzzo (1.24 for both).

   Likewise, the *Average weight* Index exceeds the national average of 1.36 in 2017, for AIOP accredited hospitals in the following regions, again in descending order:
   – Liguria (2.87);
   – Tuscany (1.71);
   – Piedmont (1.70);
   – Umbria (1.63);
   – Calabria (1.51);
   – Veneto and Apulia (1.45 for both).

   Thus, in 9 Regions, the (smaller) national average of the *Average weight* indicator for public facilities was exceeded and, in 7 Regions, the (highest) average for accredited facilities. Furthermore, in 5 Regions, the *Average weight* was exceeded by both public hospitals and accredited hospitals, namely in Piedmont, Veneto, Liguria, Tuscany and Umbria: confirming the fact that a good territorial setting is capable of generating more overall quality in both types of facilities;
c) furthermore, in 15 regions (and/or Autonomous Provinces) the *Average weight* Indicator for the year 2017 is higher for accredited hospitals than for public hospitals;
d) and finally, as regards AIOP accredited facilities, it can be added that, in 2018, the *Average weight* value increased further compared to 2017 (1.37 compared to 1.36): and this applies to 7 Regions and/or Autonomous Provinces in the North (Piedmont, Lombardy, the Province of Bolzano and the Province of Trento, Veneto and Liguria), for 2 Regions in Central

Table 3– The quality of services measured by average weight. Years 2014-2018

Regions	*Public hospitals*				*AIOP accredited hospitals*				
	2014	*2015*	*2016*	*2017*	*2014*	*2015*	*2016*	*2017*	*2018*
– Piedmont	1.29	1.30	1.30	1.33	1.61	1.65	1.64	1.70	1.72
– Lombardy	**1.19**	1.21	1.21	**1.22**	1.49	1.55	1.55	1.59	1.61
– A.P. of Bolzano	**1.09**	**1.10**	**1.12**	**1.08**	**0.80**	**0.78**	**0.78**	**0.82**	**0.84**
– A.P. of Trento	**1.18**	**1.19**	**1.19**	1.23	**0.97**	**0.97**	**1.02**	**1.09**	**1.14**
– Veneto[(a)]	1.23	1.26	1.28	1.24	1.37	1.42	1.44	1.45	1.52
– Friuli Venezia Giulia	1.25	1.26	1.26	1.27	**1.26**	**1.30**	**1.27**	**1.28**	**1.27**
– Liguria	1.26	1.27	1.27	1.27	2.64	2.80	2.82	2.87	3.08
– Emilia Romagna	1.22	1.22	1.23	1.25	1.33	1.34	1.36	1.36	**1.33**
– Tuscany	1.31	1.34	1.35	1.36	1.59	1.69	1.71	1.71	1.81
– Umbria	1.20	1.21	1.24	1.25	1.30	1.43	1.61	1.63	1.40
– Marche	1.24	1.24	1.26	1.29	**1.26**	**1.30**	**1.28**	**1.23**	**1.30**
– Lazio	1.22	1.23	1.26	**1.13**	**1.11**	**1.19**	**1.32**	**1.30**	**1.21**
– Abruzzo	**1.15**	**1.18**	**1.21**	1.24	1.28	**1.29**	**1.31**	**1.32**	**1.32**
– Molise	**1.04**	**1.05**	**1.10**	**1.12**	1.32	**1.19**	1.47	1.46	1.51
– Campania	**1.17**	**1.18**	**1.19**	**1.21**	**1.02**	**1.05**	**1.07**	**1.13**	**1.20**
– Apulia	**1.08**	**1.09**	**1.11**	**1.13**	1.44	1.50	1.50	1.45	**1.33**
– Basilicata	1.20	1.22	1.23	**1.22**	-	-	-	-	-
– Calabria	**1.07**	**1.09**	**1.12**	**1.14**	1.26	1.42	1.44	1.51	**1.24**
– Sicily	**1.15**	**1.16**	**1.18**	**1.19**	**1.16**	**1.12**	**1.19**	**1.05**	**1.34**
– Sardinia	**1.11**	**1.13**	**1.14**	**1.16**	**0.86**	**0.88**	**1.19**	**1.24**	**1.31**
Italy	*1.20*	*1.21*	*1.23*	*1.23*	*1.28*	*1.32*	*1.35*	*1.36*	*1.37*

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 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 accredited hospitals associated with AIOP and under the control of USL facilities.

(b) The high average weight is due to the presence of two accredited hospitals, largely devoted to extremely specialized treatment.

Source: *data processed by Ermeneia – Studi & Strategie di Sistema based on the Ministry of Health and AIOP data*

Italy (Tuscany and Marche), as well as for 4 Regions in the South and Islands (Molise, Campania, Sicily and Sardinia).

Yet, also in the case of the *Average weight* indicator, we can see a non-uniform "average level" of services and, in particular, a decrease (albeit with different types of intensity) in some Regions, especially (but not only), in the South for public facilities and more in the Center-South Italy than in the North for accredited facilities: in this regard, the indicators have been shown taking into account those that are (even slightly) below the national *Average weight* for the reference year.

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*[4]. The values in Table 4 below permit the following considerations to be made:

a) both types of facilities have witnessed stabilization of this indicator value: it has remained fixed at 0.98 for the four years indicated with regard to public hospitals, whereas for AIOP accredited hospitals, after a slight rise in 2015 from 2014 (1.09 compared to 1.05) the Index stabilized at 1.08;
b) the national *case-mix* indicator for hospitals accredited with AIOP appears permanently higher than that of the public hospitals in all cases, as can be seen by comparing the data of the last line in Table 4;

[4] 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.

c) the regions that exceed the national average (0.98 in 2017) with respect to public institutions are 8:
   - Tuscany (1.08);
   - Piedmont (1.05);
   - Marche (1.02);
   - Friuli Venezia Giulia and Liguria (1.01 for both);
   - Veneto, Emilia Romagna and Umbria (0.99 for all three).

   The same process, applied to AIOP accredited hospitals (again for the year 2017) sees 10 Regions exceed the *Case-mix* Index of 1.08; the Regions are:
   - Liguria (2.28);
   - Tuscany (1.36);
   - Piedmont (1.35);
   - Umbria (1.30);
   - Lombardy (1.27);
   - Calabria (1.20);
   - Molise (1.16);
   - Veneto and Apulia (1.15 for both);
   - Emilia Romagna and Abruzzo (1.09 for both);

d) And finally, for the year 2017, the comparison between the *Case-mix* Index of public hospitals and that of AIOP accredited hospitals almost always shows a better position for AIOP facilities, except in the case of the Autonomous Provinces of Bolzano and Trento, Marche, Campania and Sicily.

It goes without saying again in this case that the issue of unsatisfactory "average level" of the lower *Case mix* indicators tends to penalize the South, but not only: the indicators that are below the national average – even slightly – have been shown, as was done for the *Average weight*.

In addition to the two indicators considered, others can be identified that measure the level of complexity of the services provided by the different types of hospitals in a more precise and exemplary manner, albeit with reference to some specific services. Table 5 indicates 16 highly specialized DRGs and their incidence per 1,000 discharged patients in the two types of hospital facilities considered, namely public hospitals and those AIOP accredited and associated hospitals. From this comparison, the following can be noted:

a) an average incidence that continues to increase in the three-year period 2015-2017 for public hospitals (from 25.8% to 26.8%) and a substantial (or near) stabilization for AIOP accredited hospitals which, in the same three-year period, went from 30.9% to 29.6%;

Table 4 – Comparison of AIOP public hospitals and AIOP accredited hospitals, based on the "case-mix" of the services provided. Years 2014-2017

Regions	*Public hospitals*				*AIOP accredited hospitals*			
	2014	*2015*	*2016*	*2017*	*2014*	*2015*	*2016*	*2017*
– Piedmont	1.05	1.05	1.04	1.05	1.32	1.35	1.31	1.35
– Lombardy	0.98	**0.97**	**0.96**	**0.97**	1.24	1.27	1.24	1.27
– A.P. of Bolzano	**0.89**	**0.89**	**0.89**	**0.86**	**0.65**	**0.64**	**0.63**	**0.65**
– A.P. of Trento	**0.97**	**0.96**	**0.95**	0.98	**0.80**	**0.79**	**0.81**	**0.87**
– Veneto [(a)]	1.00	1.02	1.02	0.99	1.12	1.16	1.15	1.15
– Friuli Venezia Giulia	1.02	1.02	1.01	1.01	**1.04**	**1.06**	**1.01**	**1.02**
– Liguria [(b)]	1.03	1.02	1.02	1.01	2.16	2.30	2.25	2.28
– Emilia Romagna	1.00	0.99	0.98	0.99	1.09	1.10	1.09	1.09
– Tuscany	1.08	1.08	1.08	1.08	1.30	1.38	1.36	1.36
– Umbria	0.98	0.98	0.99	0.99	1.06	1.17	1.29	1.30
– Marche	1.02	1.00	1.00	1.02	**1.03**	**1.07**	**1.02**	**1.00**
– Lazio	1.00	1.00	1.00	**0.90**	**0.91**	**0.98**	**1.05**	**1.03**
– Abruzzo	**0.95**	**0.96**	**0.97**	0.98	1.05	**1.06**	**1.04**	1.09
– Molise	**0.85**	**0.85**	**0.87**	**0.89**	1.08	**0.98**	1.18	1.16
– Campania	**0.96**	**0.95**	**0.95**	**0.96**	**0.84**	**0.86**	**0.85**	**0.92**
– Apulia	**0.89**	**0.88**	**0.89**	**0.90**	1.18	1.23	1.19	1.15
– Basilicata	**0.99**	0.99	0.98	**0.97**	-	-	-	-
– Calabria	**0.88**	**0.88**	**0.89**	**0.90**	**1.03**	1.17	1.15	1.20
– Sicily	**0.94**	**0.94**	**0.94**	**0.95**	**0.95**	**0.98**	**0.96**	**0.90**
– Sardinia	**0.91**	**0.91**	**0.91**	**0.92**	**0.70**	**0.72**	**0.95**	**0.99**
Total	*0.98*	*0.98*	*0.98*	*0.98*	*1.05*	*1.09*	*1.08*	*1.08*

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 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 accredited hospitals associated with AIOP and under the control of USL facilities.

(b) The high average weight is due to the presence of two accredited hospitals, 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 2017 (Table 5 below), the superiority of the second type of facilities compared to the first is confirmed (and often by far), except in the case of DRG 110 (Major cardiovascular system procedures with cc), 547 (Coronary bypass w cardiac cath w major cv dx), 551 (Permanent cardiac pacemaker implant w major cv dx or AICD lead or GNRTR), 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 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 during hospitalization, with reference to the individual regions as well as the national average and that of the individual geographical regions (Table 6). It should be mentioned that in this instance we are talking about accredited facilities, including private polyclinics, 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 DRG[5].

The result of this comparison (which includes the last three years) shows that:

a) as a whole, in 2017, the accredited facilities account for 21.2% of high complexity services compared to 14.9% for the public hospitals, and this difference in favor of the accredited component is particularly significant for the Regions of the North (24.8% compared to 15.1%);
b) the trend of high complexity services in the three-year period 2015-2017 also shows substantial stability for the amount of the total services with regard to public hospitals (in fact, it went from 14.4% in 2015 to 14.7% in 2016, and to 14.9% in 2017). On the contrary, the growth trend is decidedly more pronounced for the high complexity services in the accredited facilities (rising from 18.7% in 2015 to 19.9% in 2016, and ending up at 21.2% in 2017);

[5] See note in Table 6.

Table 5 – The quality of public and AIOP accredited hospital services, as measured by the incidence rates of extremely specialized[(a)] DRGs[(*)]

DRG	*Public hospitals (Incidence per 1,000 discharged patients)*			*Accredited hospitals associated with AIOP (Incidence per 1,000 discharged patients)*		
	2015	*2016*	*2017*	*2015*	*2016*	*2017*
104 Cardiac valve & oth major cardiothoracic proc w card cath	1.293	1.420	1.624	5.849	5.072	6.750
105 Cardiac valve & oth major cardiothoracic proc w/o card cath	1.626	1.599	1.548	2.737	2.511	2.468
106 Coronary bypass w PTCA	0.031	0.034	0.041	0.179	0.137	0.169
108 Other cardiothoracic procedures	0.501	0.528	0.476	0.822	0.685	0.846
110 Major cardiovascular procedures w cc	1.558	1.598	1.579	1.193	1.079	1.056
111 Major cardiovascular procedures w/o cc	1.531	1.519	1.589	2.199	2.058	2.257
515 Cardiac defibrillator implant w/o cardiac cath	1.596	1.630	1.593	1.736	1.886	1.897
535 Cardiac defib implant w cardiac cath w ami/hf/shock	0.298	0.318	0.340	0.668	0.604	0.764
536 Cardiac defib implant w cardiac cath w/o ami/hf/shock	0.387	0.394	0.384	0.684	0.605	0.574
547 Coronary bypass w cardiac cath w major cv dx	0.165	0.173	0.199	0.238	0.182	0.163
548 Coronary bypass w cardiac cath w/o major cv dx	0.395	0.403	0.394	1.323	1.060	1.211
549 Coronary bypass w/o cardiac cath w major cv dx	0.157	0.179	0.194	0.468	0.438	0.243
550 Coronary bypass w/o cardiac cath w/o major cv dx	0.762	0.752	0.720	2.163	1.866	1.813
551 Permanent cardiac pacemaker impl w maj cv dx or aicd lead or gnrtr	1.607	1.682	1.600	1.926	1.770	1.527
552 Other permanent cardiac pacemaker implant w/o major cv dx	4.865	4.995	5.097	5.042	4.432	4.769
553 Other vascular procedures w cc w major cv dx	0.277	0.296	0.281	0.120	0.121	0.121
Mean Incidence	*25.776*	*26.541*	*26.793*	*30.941*	*27.760*	*29.588*

(*) Inpatient admissions for acute cases.

(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 6 – Comparison of percentages of high, medium and low complexity cases of services provided to acute patients during hospitalization, a comparison of the public and private hospital components of the NHS, divided by Regions – 2017

Regions	Public hospital component									Private hospital component (Accredited facilities)								
	High complexity			Medium complexity			Low complexity			High complexity			Medium complexity			Low complexity		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Piedmont	15.9	16.0	16.6	35.0	34.7	35.2	49.2	49.3	48.2	17.9	19.7	25.0	23.4	23.7	26.6	58.7	56.6	48.4
Aosta Valley	15.5	16.3	15.8	34.2	34.9	35.2	50.2	48.8	49.0	28.8	31.9	37.1	7.9	9.3	17.6	63.2	58.8	45.3
Lombardy	14.0	14.2	14.5	31.1	31.2	31.5	54.9	54.6	54.0	22.6	24.1	25.3	31.0	31.7	31.2	46.4	44.2	43.5
Bolzano	12.8	13.5	13.3	28.1	28.9	28.6	59.1	57.6	58.1	-	-	-	23.4	24.0	27.0	76.6	76.0	73.0
Trento	14.5	14.4	15.4	36.0	35.8	36.2	49.5	49.8	48.4	15.5	19.8	22.0	28.3	27.0	31.0	56.2	53.2	47.0
Veneto	15.9	15.9	14.5	35.2	34.8	34.8	48.9	49.3	50.7	28.3	29.7	28.1	31.6	31.3	31.0	40.1	39.0	40.9
Friuli V.G.	15.5	15.4	15.6	34.7	35.3	35.1	49.7	49.3	49.3	22.6	21.3	22.5	24.1	23.2	22.0	53.3	55.5	55.5
Liguria	16.2	16.6	15.4	39.8	40.6	40.1	44.0	42.8	44.5	20.7	20.6	19.7	37.2	36.5	34.9	42.0	42.9	45.4
Emilia R.	14.2	14.3	15.2	35.8	35.9	36.6	50.1	49.8	48.2	18.1	18.0	22.1	28.1	27.6	26.1	53.8	54.4	51.8
Tuscany	17.1	17.5	17.7	39.4	39.8	39.8	43.4	42.7	42.5	33.5	36.2	38.1	24.9	24.8	24.4	41.6	39.0	37.5
Umbria	14.2	15.1	15.3	31.9	33.1	34.1	53.9	51.8	50.6	25.3	30.0	31.4	18.9	19.3	18.2	55.8	50.7	50.4
Marche	15.1	15.6	16.6	35.8	36.3	37.4	49.1	48.1	46.0	17.7	19.1	23.6	24.2	23.3	26.3	58.1	57.6	50.1
Lazio	16.1	17.0	15.9	33.4	34.0	30.4	50.5	49.0	53.7	15.7	16.7	16.5	33.5	33.8	32.7	50.9	49.5	50.8
Abruzzo	14.6	15.4	15.6	35.4	36.3	37.4	50.0	48.3	47.0	22.2	21.4	23.1	30.1	28.9	30.0	47.7	49.7	46.9
Molise	10.3	11.2	12.3	30.9	33.5	34.1	58.8	55.3	53.6	27.3	28.6	31.6	37.5	37.5	35.8	35.2	33.9	32.6
Campania	12.3	12.6	13.5	30.4	30.9	32.0	57.3	56.5	54.5	11.1	11.9	13.2	28.2	28.3	28.6	60.7	59.8	58.2
Apulia	10.7	11.3	11.9	31.9	32.9	34.2	57.4	55.8	53.9	16.0	17.1	18.0	34.6	35.7	36.1	49.4	47.2	45.9
Basilicata	14.0	13.8	13.7	37.2	37.6	38.1	48.8	48.6	48.2	31.4	35.1	-	32.0	23.3	-	36.6	41.6	-
Calabria	11.1	11.9	12.3	31.9	32.1	34.4	57.1	56.0	53.3	24.4	29.2	30.5	34.3	33.2	32.2	41.3	37.6	37.3
Sicily	14.4	15.0	15.6	34.6	34.9	34.9	51.0	50.1	49.5	16.9	18.9	19.8	33.5	34.2	33.9	49.6	46.9	46.3
Sardinia	11.6	12.3	12.3	32.3	32.9	33.9	56.1	54.8	53.8	13.1	14.3	15.6	16.8	18.0	17.7	70.0	67.7	66.7
North	14.9	15.0	15.1	34.0	34.1	34.4	51.1	50.9	50.5	22.0	23.2	24.8	29.9	30.2	30.0	48.2	46.6	45.2
Center	16.1	16.8	16.7	36.0	36.5	35.7	47.9	46.7	47.6	18.2	19.4	19.7	31.5	31.9	31.1	50.3	48.7	49.2
South	12.5	13.0	13.6	32.6	33.2	34.2	54.9	53.8	52.2	15.3	16.5	17.5	31.2	31.6	31.7	53.5	51.9	50.8
Italy	*14.4*	*14.7*	*14.9*	*34.0*	*34.3*	*34.6*	*51.7*	*51.0*	*50.5*	*18.7*	*19.9*	*21.2*	*30.7*	*31.1*	*30.8*	*50.6*	*49.0*	*48.0*

(*) 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 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 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 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.

Public hospital services are provided by: Hosp. Centers, Univ. Hosp. 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 Facilities, Accredited Hospitals.

Source: *survey by Ermeneia – Studi & Strategie based on data from Minister of Health – SDO 2017*

c) an examination of the data relating to the "average level" shows obvious weakness as regards the South, given that the amount of high complexity services is 13.6% for public facilities in the year 2017 compared to 15.1% in the North and 16.7% in Central Italy. A similar differentiation – albeit on better levels – occurs for the high complexity services provided by the accredited facilities, given that in the same year they were 17.5% in the South compared to 24.8% in the North and 19.7% in Central Italy (thus with a much more pronounced distance between North and South than in the case of public facilities);
d) again, as relates to the "average level", it is worth mentioning that even the three-year growth trend of high complexity services places the public facilities that managed to improve this figure over the three-year period at about 1 percentage point less in the North and in Central and South Italy, whereas it increases by about 2 percentage points for the accredited facilities in the North and in Central and South Italy.

As for the comparison of medium and low complexity services, it can be noted:

- stability of medium-complexity services over the three-year period: around 34% or slightly more for public facilities and, obviously, a little less for accredited facilities (around 30%-31%);
- and a substantial convergence of low-complexity services between public and accredited facilities: the former are around 51% and the latter at just under 50% in the last three years.

Closely related to the indicators used so far, it is also possible to consider the one that illustrates the effectiveness of the treatments, that is, the maintenance and the possible improvement/deterioration of the average statistical services that use the National Outcome Evaluation Program (Programma Nazionale Valutazione Esiti, PNE), developed by Agenas on behalf of the Ministry of Health which provides comparative assessments of efficacy, safety, efficiency and quality of 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 eq-

uity 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 2019 edition of the PNE Report is based on the same methodologies described in the *Health&Hospitals* 2018[6] Report.

More precisely, the processing of information is based on 28 outcome indicators and in particular[7]:

- 19 "TREEMAP" outcome indicators (2 TREEMAP volume indicators have been excluded);
- and 9 outcome indicators considered relevant for the private hospital component according to the volume of activity: in particular, these are 5 indicators of the musculoskeletal clinical area, 3 indicators for the pregnancy and childbirth area and, finally, 1 indicator for surgical procedures (cholecystectomy).

Table 7 shows the outcome indicators structured according to the approach used for the complexity indicators (such as the *Average weight* and the *Case mix*). The assessment of the national values refers to the 28

[6] See Part One /Section 1.3, pp. 30-31.

[7] For further information see AIOP Notebooks / 6, "Report on the quality of the clinical *outcomes* in private hospitals", specially prepared by Innogea Srl (Palermo) on behalf of AIOP – Italian Association of Private Hospitals.

Table 7 – Outcome indicators (with risk adjustment *values) for 28* TREEMAP *indicators, comparing the results of public hospitals and private hospitals*[1]

Indicators	*Total cases*	*Number of treated cases*				*National average of Outcomes*[2]		*Outcome Improvement 2017-2018*[2]	
		Public hospitals		*Private hospitals*		*Public hospitals*	*Private hospitals*	*Public hospitals*	*Private hospitals*
		Number of cases	*%*	*Number of cases*	*%*				
Valvuloplasty or replacement of heart valves: 30-day mortality	37,882	20,939	55.3	16,786	44.3	3.03	**2.3**	0.2	**-0.28**
Aortocoronary by-pass: 30-day mortality	27,397	17,191	62.7	10,094	36.8	2.04	2.04	**-0.32**	**-0.46**
Ami: 30-day mortality	88,284	80,556	91.2	6,439	7.3	8.29	**7.59**	**-0.43**	0.18
Ami: % treated with PTCA within 2 days	88,284	78,628	89.1	6,439	7.3	47.06	**57.22**	**2.39**	**2.18**
Congestive heart failure: 30-day mortality	132,862	108,836	81.9	18,572	14	11.69	**7.55**	0.44	0.64
Repair of unruptured aneurysm of the abdominal aorta: 30-day mortality	16,947	13,468	79.5	3,282	19.4	2.15	**1.41**	**0.12**	0.03
Ischemic stroke: 30-day mortality	60,836	51,537	84.7	3,618	5.9	10.74	**7.52**	**-1.45**	0.11
Surgery for cerebral tumor: 30-day mortality	29,211	25,409	87	1,177	4	2.68	2.51	0.98	0.59
Exacerbated COPD: 30-day mortality	78,084	65,008	83.3	11,309	14.5	11.15	**4.59**	0.44	**-0.87**
Laparoscopic Cholecystectomy: post-operative stay of less than 3 days	64,843	44,706	68.9	15,447	23.8	74.87	**82**	**3.95**	**1.54**
Laparoscopic Cholecystectomy: complications after 30 days	133,033	86,172	64.8	31,179	23.4	2.43	**1.41**	**-0.12**	**-0.07**
Proportion of Deliveries by primary cesarean section	339,674	276,843	81.5	31,632	9.3	**22.97**	35.76	**-2.4**	**-2.84**
Proportion of Vaginal deliveries after previous Cesarean section	66,605	32,394	48.6	11,646	17.5	**7.89**	4.1	**0.4**	**0.36**
Cesarean deliveries: complications during childbirth and the puerperium	301,705	241,869	80.2	46,288	15.3	0.84	**0.52**	**-0.13**	**-0.1**
Cesarean deliveries: subsequent hospitalizations during the puerperium	301,705	241,869	80.2	46,288	15.3	0.92	**0.61**	0.02	**-0.04**
Natural deliveries: complications during childbirth and the puerperium	544,567	465,271	85.4	48,997	9	0.53	0.5	0.04	**-0.01**
Natural deliveries: subsequent hospitalizations during the puerperium	535,129	285,140	53.3	50,285	9.4	0.57	0.54	0.08	**0.03**
Surgery for colon tumor: 30-day mortality	47,770	36,490	76.4	4,951	10.4	3.94	**2.6**	**-0.48**	**-0.84**
Surgery for lung tumor: 30-day mortality	25,364	21,836	86.1	3,051	12	**0.95**	1.62	**-0.35**	0.37
Surgery for stomach tumor: 30-day mortality	18,203	15,659	86	2,064	11.3	4.36	**2.9**	**-1.74**	-0.02
New resection interventions within 120 days from conservative surgery	37,224	28,665	77	7,827	21	7.24	6.96	**-1.16**	0.51
Fracture of the neck of the femur: surgery within 2 days	71,040	64,849	91.3	4,916	6.9	62.7	**73.82**	**11.81**	**6.66**
Hip prosthesis: readmissions after 30 days	75,741	41,954	55.4	29,135	38.5	4.06	**2.95**	**-0.22**	**0**
Hip prosthesis: new surgery after 2 years	76,933	46,368	60.3	25,765	33.5	1.85	1.88	**-2.43**	**-1.07**
Knee prosthesis: readmission after 30 days	55,501	16,201	29.2	35,027	63.1	1.75	**1.32**	**-0.9**	**-0.1**
Knee prosthesis: new surgery after 2 years	53,609	17,736	33.1	31,544	58.8	2.85	2.65	**-0.43**	**-0.16**
Knee Arthroscopy: new surgery after 6 months	117,891	44,195	37.5	63,985	54.3	**0.89**	1.14	**-0.9**	**-0.1**
Fracture of the tibia and fibula: waiting times for surgery (days)	11,039	10,052	91.1	795	7.2	4.19	**2.72**	**-0.61**	**-0.48**

(1) For public hospitals, the following were considered: Hospital Centers, Hospitals directly managed by local health authorities, public Institutes for Treatment and Research and Public Foundations. Whereas for private hospitals the following were considered: Accredited Hospitals, Non-Accredited Healthcare Facilities, Private University Polyclinics, Private Institutes for Treatment and Research and Private Foundations.

(2) The values shown in light gray represent the best *services* validated by the statistical significance test. Where the comparison does not show any highlighted data, the higher value for one of the two groups examined might be a chance result.

Source: *AIOP Notebook no. 6, "Report on the quality of the clinical* outcomes *in private hospitals", prepared by Innogea using Agenas data-National Outcome Evaluation Program (PNE) 2018*

TREEMAP indicators[8] is based on PNE data from December 2018 and reports the adjusted risk ADJ (*Risk adjustment*)[9] values obtained for public and private hospitals[10], respectively, and compares the 2017 results with those of 2018.

The data contained in Table 7 contribute to illustrating:

- first of all, the best service levels achieved by a hospital type, highlighting the scores attained by the best ones (see columns 6[a] and 7[a] of the table): the comparison shows a more solid positioning for private hospitals (with 18 better outcome indicators out of the 28 used) than public ones (with 4 better outcome indicators out of the 28 used);
- and the improvement of the outcome indicators between 2017 and 2018 (see columns 8[a] and 9[a] of Table 7) within each type of hospital: the comparison displays a slightly better gain for public hospitals (21 out of 28 service levels) compared to private hospitals (19 out of 28 service levels);
- however, apart from the improvement just mentioned, it should be borne in mind that the positioning of the average outcome in 2018 remains significantly better for private hospitals than for public ones, as shown in the last two columns of Table 7.

[8] 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.

[9] 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.

[10] For public hospitals, the following were considered: Hospital Centers, Hospitals Directly Managed by Local Health Authorities, public Institutes for Treatment and Research and Public Foundations. Whereas for private hospitals the following were considered: Accredited Hospitals, Non-Accredited Healthcare Facilities, Private University Polyclinics, private Institutes for Treatment and Research and Private Foundations.

1.3. Confirmation of an insufficient, and subjectively perceived, "average level" of hospital services with consequent reactive user behavior

The previous section explained the territorial differences of the levels of complexity and effectiveness (Outcomes) of the services within a national average trend that has grown over time, at the level of overall statistical indicators. It also stressed that the aforementioned differences essentially refer to the territories of the South compared to those of the rest of the country: this means that the statistical national average values conceal a "mean" – that is, an acceptable and widespread average level – which is not uniformly ensured to the different territories.

We wished to go beyond the objective explanation of this phenomenon just given, and also explore it subjectively, by referring to the perception of those people who appear to be most "informed about the facts", namely the *caregivers*, who – in carrying out their role – have had multiple experiences in the field of healthcare, being involved both on a personal level, on the one hand, and with regard to other family members, on the other.

The first group of data in Table 8 shows (the percentages were calculated net of non-responses)[11]:

- the existence of an "entirely satisfactory and/or satisfactory" average level of services received over the past two years among 64.1% of those who had experiences with public hospitals, which however rose to 73.8% for accredited hospitals and 76.7% for paid private clinics;
- and, on the other hand, once again over the past two years, the existence of a "slightly and/or completely unsatisfactory" average level of services, which is higher for public hospitals (35.9%) and lower for accredited hospitals (26.2%) and for paid private clinics (23.3%);
- and, finally, the existence of a "slightly and/or completely unsatisfactory" average level of services that appears to be much more marked among the opinions of *caregivers* in the South: for public hospitals in particular (47.8% compared to an overall average of 35.9%), which goes only slightly upwards for accredited hospitals (27.3% compared to 26.2%), and which is slightly lower for paid private clinics (22.4% compared to 23.3%), thus confirming the evident presence of an insufficient average level involving public hospitals more sharply than the others.

[11] Non-responses totaled 9.2% regarding experiences had by *caregivers* in public hospitals, 32% in the case of experiences at accredited hospitals and 53.7% for experiences in paid private clinics.

Faced with a "average level" of services deemed unsatisfactory (especially in the South), a set of "reactive" behaviors by patients and their families has arisen, which appears completely understandable. These primarily involve the use of hospitals outside the home Region, and this phenomenon is immediately visible from the flows of extra-regional healthcare mobility (see the second group of data in Table 8). In fact:

- the total number of hospitalizations (for all types and related regimes) went from about 810,000 units in 2010 to 726,000 units in 2018: but what appears to be a reduction actually represents an increase, since the incidence of extra-regional hospital admissions out of the total of hospital admissions nationally rose from 7.6% in 2010 to 8.8% in 2018. And this is due to a significant downward trend in overall hospital admissions that has continued to solidify over the years: in fact, in-hospital stays fell from 10.7 million units in 2010 to 9.0 million units in 2014 (-15.9%), and to 8.2 million units in 2018 (for a further -9.0%);
- but if we consider the corresponding data relating to the Regions in the South, the number of extra-regional hospital admissions for this geographical area becomes larger and increases over time compared to the rest of the country: + 9.5% in 2010, + 10.5% in 2014 and + 12.2% in 2018 (this growth exists also in the Center-North, but continues to see much lower percentage incidences: 6.5%, 6.9% and 7.4%); while the percentage of total hospitalizations in the South decreased by 20.4% in 2014 compared to 2010 and again by 15.9% in 2018 compared to 2014: this *trend* has meant that the incidence of total extra-regional hospital admissions in the South out of the total of extra-regional hospital admissions nationally continues to remain above 40.0%, although it has decreased over time: from 44.9% in 2010 to 42.8% of the 2018.

Even the stated tendencies and behaviors of the *caregivers* regarding their inclination to go to hospitals outside their home region have shown an obvious increase over time (see the third group of data in Table 8). In fact:

- the number of *caregivers* who actually attempted this option for one or more people in their family or who intended to use this option but then gave up due to excessively lengthy waits or because the local health authorities did not grant authorization or, even if they did not make the attempt but nevertheless actively evaluated the possibility of contacting other hospitals outside their home region, rose on the whole from 10.1% in 2016 to 12.4% in 2019;
- the number of *caregivers* who did not attempt to use this option due to the expenses that they would have had to bear to accompany the patient or the *caregivers* who would have been willing to use this option in the

Table 8 – The perception of an unsatisfactory "average level" of services (especially in the South) and the reactive behaviors of the caregivers *(av and % val.)*

Phenomena	*Data*		
– Assessment of a more or less acceptable "average level" of the hospital services in the home Region based on the experiences of the *caregivers* and/or other family members over the last two years (the percentages shown are net of non-responses):[1]	*Public hospitals*	*Accredited hospitals*	*Paid private clinics*
▪ Completely satisfactory + satisfactory average level	64.1	73.8	76.7
▪ Slightly + completely unsatisfactory average level	35.9	26.2	23.3
▪ Slightly + completely unsatisfactory average level in South Italy	47.8	27.3	22.4
– Use of hospital facilities in other Regions for treatment/procedures in the last twelve months by care-givers and/or family members compared to the trend of total hospitalizations[2]:	*2010*	*2014*	*2018*
▪ Total number of hospitalizations in extra-regional facilities (rounded data)	810,000	735,000	726,000
▪ % of other region hospitalizations out of total hospitalizations	7.6	8.2	8.8
▪ Δ percentage of total hospitalizations compared to the years indicated	-	-15.9	-9.0
▪ Number of total extra-regional hospitalizations by the Regions in the South (rounded data)	363,000	320,000	311,000
▪ % of other region hospitalizations out of total hospitalizations in the Southern Regions	9.5	10.5	12.2
▪ % of other region hospitalizations out of total hospitalizations in the Central- Northern Regions	6.5	6.9	7.4
▪ Δ percentage of total hospitalizations in the Southern regions, with reference to the years considered	-	-20.4	-15.9
▪ % of total extra-regional admissions in the South of Italy out of extra-regional admissions at the national level	44.9	43.6	42.8

				2019	
– The propensity over the last 12 months to resort to hospital facilities outside the home Region by *caregivers* and/or other family members[3]	*2016*	*2017*	*2018*	*Total*	*South and Islands*
▪ Inclination to actually make use of extra-regional hospital facilities	10.1	16.4	16.4	12.4	17.5
▪ Inclination to potentially make use of extra-regional hospital facilities	18.1	31.3	43.9	39.6	42.4
▪ The issue did not arise	71.8	52.3	51.7	50.1	48.0

– Use in the last two years of accredited hospital facilities or paid private clinic services by caregiver and/or other family members following inconveniences experienced with access to services provided by public hospitals and the relative quality of these services[4]:	*2017*	*2018*	*2019*
▪ Use of accredited facilities	16.1	35.2	30.2
▪ Use of paid private clinic services	4.8	11.4	13.0

– Most important reasons why *caregivers* and/or other family members made use of accredited hospital facilities over the past two years[5]:	*2017*[1]		*2018*[1]		*2019*[2]	
▪ Shorter waiting times for services	*1st*	(44.6)	*1st*	(38.7)	*1st*	(36.8)
▪ **Greater confidence in the accredited hospital and the doctors who work there**	***2nd***	**(29.3)**	***2nd***	**(28.7)**	***2nd***	**(25.2)**
▪ **Hospital's proximity to home**	***4th***	**(21.8)**	***3rd***	**(26.3)**	***3rd***	**(24.6)**
▪ **A careful and well-reasoned assessment by the family**	***5th***	**(19.9)**	***4th***	**(15.7)**	***4th***	**(19.1)**
▪ Too long a wait for admission to a public hospital	*3rd*	(24.0)	*5th*	(13.9)	*5th*	(13.2)
▪ **Advice of relatives, friends and acquaintances**	***6th***	**(12.2)**	***6th***	**(11.5)**	***6th***	**(9.3)**
▪ **Family tradition**	***10th***	**(6.2)**	***9th***	**(5.2)**	***7th***	**(8.0)**
▪ Average number of reasons per respondent		*2.0*		*1.7*		*1.7*

./.

(Continued) *Table 8 – The perception of an unsatisfactory "average level" of services (especially in the South) and the reactive behaviors of the* caregivers *(av and % val.)*

Phenomena	*Data*		
– Increased *out-of-pocket* healthcare spending by Italian families[6]:	*2014*	*2016*	*2018*
▪ In millions of euros (at current prices)	33,918	35,912	37,484
▪ I.N.: 2014 = 100.0	100.0	105.9	110.5

	Postponements			*Forgoing of care*		
– Amount of postponements and forgoings of the most significant services indicated below, which directly involved the *caregivers* and/or members of their family (calculated out of the total of respondents who actually attempted to use + the total of those who postponed + the total of those who gave up)[7]:	*2016*	*2017*	*2018*	*2016*	*2017*	*2018*
▪ Specialist visits	10.3	13.4	16.1	7.6	7.1	9.6
▪ Dental care	14.7	14.0	17.7	12.4	13.4	14.1
▪ Diagnostic tests	11.5	13.7	14.5	7.5	7.9	11.8
▪ Laboratory exams	8.4	8.4	11.7	3.7	5.4	5.6
▪ Hospital admissions	15.2	15.1	17.2	13.6	12.3	12.3
▪ Access to the Emergency Room	11.4	13.7	14.7	10.8	12.3	8.3
– Reasons for the postponing and/or forgoing of treatment8:	*2016*		*2017*		*2018*	
▪ Waiting lists for services are too lengthy	2nd	(52.1)	2nd	(47.6)	1st	(51.7)
▪ Family financial difficulties (to pay for co-payment charges, access, services, etc.)	1st	(54.6)	1st	(48.8)	2nd	(30.0)
▪ Bureaucratic difficulties in gaining access to services	3rd	(15.8)	3rd	(16.1)	3rd	(19.2)
▪ The reduction of treatments (and services) offered to patients	4th	(10.2)	4th	(14.0)	4th	(16.1)
▪ The deterioration of treatments (and services) offered to patients	5th	(8.9)	5th	(10.0)	5th	(13.1)
– Average number of reasons per respondent	1.4		1.4		1.3	

(1) See Part Three/Table 18, p. 238.
(2) Processing of Ministry of Health data, based on the SDO data (total typologies and admissions).
(3) See Part Three/Table 21, p. 245 (some multiple responses are given).
(4) See Part Three/Table 19, p. 241.
(5) See Part Three/Table 20, p. 242 (these are multiple answers as seen by the average number of reasons per respondent).
(6) Source: Istat/Dataset: Expenditure at current prices for healthcare by Italian families.
(7) *Health&Hospitals/2018* Report/Part Three/Table 42A, p. 229.
(8) *Health&Hospitals/2018* Report/Part Three/Table 43, p. 231 (the percentages shown represent the "clustering of responses" and may therefore be multiple).

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

event of a serious health problem saw a more dramatic rise overall, going from 18.1% in 2016 to 39.6% in 2019: and the relative decrease in 2018 probably has to do precisely with the explicit or implicit disincentive systems to go outside the Region as well as the additional burden that families would have to bear.

Moreover, the constraint constituted by any local health authority authorization required for the health mobility mentioned above through the answers provided by the *caregivers* is reflected in the State-Regions Agreement of September 29, 2016 (and subsequent additions) and tends to "regulate" the financial flows associated with the aforementioned patient mobility. In fact, the reduction of the relative budget was also underlined by the privileged witnesses of 20 Italian regions[12], who say that "significant and/or somewhat significant consequences" have been felt in this regard:

- in terms of the recognized budget (in 50.0% of cases);
- in terms of patient flow (in 44.4% of cases).

It should be recalled that the propensity to make greater use of extra-regional healthcare facilities is higher in the South than in the rest of the country, but this occurs in more general terms also for respondents with an upper-middle or upper social and economic level and who are therefore more capable of making decisions in this sense given the greater amount of family resources available to bear the subsequent costs[13].

Related to the reactive behavior constituted by the propensity to look for other hospital facilities outside of one's home region is the potential use of accredited hospitals or paid private clinics if any inconvenience has been experienced when accessing the healthcare and services of public hospitals. This has happened (with reference to the last two years) to *caregivers* and other family members (see fourth data set of Table 8):

- who have increasingly chosen accredited hospital facilities: for 16.1% in 2017, 25.2% in 2018 and 30.2% in 2019,
- or who have chosen paid private clinics: for 4.8% in 2017, 11.4% in 2018 and 13.0% in 2019.

The trend therefore seems to be that of a considerable increase over time of a reaction aimed at finding – and therefore experimenting with – alternative hospital facilities compared to public ones. This can happen for a variety of reasons. The top four reasons (at least in 2018 and 2019) were: shorter waiting times for services (1st place), greater confidence in the accredited hospital and the doctors who work there (2nd place), the proximity of the

[12] These are the AIOP Regional Presidents of 20 Italian Regions and/or Autonomous Provinces, interviewed during the month of October 2019.

[13] See Section 4 of the Appendices, *Table A21*.

hospital to one's own home (3rd place) and a careful and well-reasoned assessment by the family (4th place). All of this saw an average number of reasons given by the *caregivers* who responded range from 2.0 in 2017 to 1.7 in 2018 and 2019.

A further indicator of "reactive" behavior by families is that of *out-of-pocket* spending for healthcare, which of course may either be as part of or in place of the services provided by the National Health Service: the aim being to obtain better services and/or shorter times and/or more trustworthy facilities or professionals both inside and outside the home Region. Between 2014 and 2018, the aforementioned expenditure (at current prices) increased from EUR 33.9 billion in 2014, to 35.9 in 2016, and to EUR 37.5 billion in 2018, an increase of 10.5% in the four-year period considered (see sixth data group in Table 8).

Related to the reactive behaviors implemented by *caregivers* in terms of the use of extra-regional hospitals or the use of non-public hospital facilities is – and this is certainly not marginal – the incentive to postpone and/or forgo services that were deemed necessary. For this (see last data group of Table 8):

- an increase can be seen in the phenomenon of postponement and forgoing of care: it appears to be growing considerably as can be seen in the three-year period, reaching 16% -17% for postponements and 12%-14% for the forgoing of care (out of the total number of respondents who thought they needed specific services);
- at the same time, there is a reported set of reasons for postponements and/or the forgoing of care that includes excessively long waiting lists consistently in 1st place with 51.7% of responses (it was in 1st place for the two previous years), followed by family economic difficulties (2nd place in 2018 compared to 1st place in the two previous years), and then bureaucratic difficulties to gain access to services (permanently in 3rd place), and then the rationing of the services offered to patients (permanently in 4th place), and finally, the deterioration in the quality of services offered to patients (5th place for all three years considered).

2. An examination of some of the specific hardships experienced by patients and families

2.1. The significant increase in waiting times for local health authority services, hospital admissions and access to the Emergency Room in the last year

Section 1.3 above described how the length of the waiting lists was ranked 1st by the *caregivers* as the most important reason to turn to accredited hospitals as an alternative.

It is therefore interesting to evaluate – as we did last year – the impact of the experiences it had on the representative sample of the entire population, in order to verify the trend between 2018 and 2019. In this regard, Table 9 provides a fairly comprehensive picture, which shows:

a) a growing percentage of the population who have experienced waiting lists to access local health authority services (such as laboratory tests, diagnostic tests, specialist visits and/or small outpatient interventions) one or more times over the last twelve months: in fact, the figure went from 30.7% in 2018 to 39.2% in 2019 and – in absolute values – from 15.6 million to 19.9 million adults.
   The behaviors adopted by the latter show a more pronounced "reactivity" in 2019 compared to the previous year: those who patiently waited for their turn dropped from 69.4% in 2018 to 63.2% in 2019, whereas, conversely, the number of people who sought for alternatives increased (from 30.6% to 36.8%) through the use of other public hospitals or accredited hospitals or even private clinics and/or other paid agencies (see first group of data in Table 9);
b) also the percentage of the adult Italian population who has had one or more experiences with waiting lists for hospital admission has seen accelerated growth, from 8.0% in 2018 to 16.9% in 2019 (in absolute terms, from 4.1 million to 7.9 million units). It should, however, be noted in this regard that the particularly pronounced increase in these lists is also due

to the fact that in 2019 people were asked to specifically distinguish between waiting lists that concerned serious surgical services/treatments, on the one hand, and minor surgical/treatment services, on the other: and this has probably brought about a more precise response to the issue addressed (and more closer to reality). Again in this case, the "reactivity" of people saw a parallel increase, given that those who patiently waited their turn dropped significantly, going from 68.9% in 2018 to 42.7% in 2019. As a consequence, the respondents who instead adopted other types of behavior, such as the use of other public hospitals or accredited hospitals or facilities outside the Region, etc., rose from 31.1% in 2018 to 57.3% in 2019 (see second data group of Table 9);

c) the percentage of the adult population who had one or more experiences with waiting lists for services for *day hospital* and/or for *day service* (reported for the first time this year) was:
   - 10.8% for *day hospital* services (5.5 million units);
   - 12.7% for *day service* outpatient medical services (6.4 million units);
   - and, finally, 9.8% for *day service* outpatient surgery services (5.0 million units);

   Of course, it is possible that there are overlaps of experiences with waiting lists among the three services mentioned: for example those who experienced those for the *day hospital* may have been placed on waiting lists for *day service* outpatient medical services (in 57.2% of cases) as well as for *day service* outpatient surgery services (in 52.1% of cases)[1]. The sample respondents may also have patiently waited their turn or may even have found alternative solutions to the services mentioned here. There are no significant differences depending on the type of medical need (whether serious or minor): in fact, about 61% of the respondents waited their turn, whereas 32.0% sought alternative solutions (from public hospitals or accredited hospitals or even from fully paid private facilities) for serious medical needs, to which, however, an additional 6.5% postponed or even forwent services; 35.5% of respondents sought out alternative solutions for minor problems, and a further 3.9% of the respondents declared that they postponed or completely forwent services (see third group of data of Table 9);

d) respondents who had multiple experience with waiting lists in 2019 and who adopted more pronounced reactive behaviors (whether for local health authority services, in-hospital stays or *day hospital* and/or *day service*) were predominantly women rather than men, subjects residing in

[1] See Part Two/Table 34A, p. 178.

medium or medium-large cities and people with a high or medium-high level of education as well as who belonged to an upper-middle and/or upper social and economic class (see fourth group of data in Table 9);

e) finally, the possible phenomenon of multiple experiences with waiting lists was also assessed in the sense, for example, that the respondents on the waiting list for local health authority services over the last twelve months may have also experienced lists for other services, namely:
   - for inpatient admissions 37.3%;
   - for *day hospital* services 22.8%;
   - for *day service* outpatient medical services 26.3%;
   - for *day service* outpatient surgery services 21.6%;
   - and for access to the public Emergency Room, 47.6%.

   Obviously the "combination" of different waiting lists is extremely variable, in the sense that not all those belonging to one of the groups just mentioned are necessarily part of all the other groups, so that the average number of experiences with waiting lists was 1.6 per individual respondent (see last group of data in Table 9).

Additional feedback information on the trend of the waiting list problem for local health authority services and inpatient admissions was collected through a special survey of privileged witnesses[2]. What this revealed was that out of 20 Regions and/or Autonomous Provinces:

- the issue of waiting lists for access to local health authority services constitutes a "very + quite serious" problem for almost all the respondents (95% of cases, of which 40% "very serious" and 55% "quite serious"); the same issue, but connected to access to public hospitals, was "very + quite serious" for 84.2% of respondents (of which 15.8% "very serious" and a further 68.4% "quite serious");
- additionally it is also believed that the situation of the waiting lists has "greatly and/or somewhat worsened" over the past three years in 20.0% of cases with regard to local health authority services and in 26.3% of cases with regard to hospitalizations;
- however, agreements or conventions have been signed with the facilities accredited by the Regional Healthcare Systems in order to reduce the times of these lists and this occurred in 52.9% of cases for local health authority services and in 30.8% of cases for access to public hospitals: to these percentages must be added the extensions of agreements in this sense already existing, which amount to 11.8% in the first case and to 7.7% in the second case.

[2] These are the AIOP Regional Presidents of 20 Italian Regions and/or Autonomous Provinces, interviewed during the month of October 2019.

Table 9 – Significant increase of experiences with waiting lists by people between 2018 and 2019 (% val)

Phenomena	*Data*	
WAITING LISTS FOR ASL SERVICES	*2018*	*2019*
– Percentage incidence on the adult population and number of people with one or more experiences of waiting lists for access to ASL services (laboratory tests, diagnostic tests, specialist visits and/or small outpatient procedures) during the last twelve months[1], of which:	30.7 *(15.6 mil.)*	39.2 *(19.9 mil.)*
– Behaviors adopted by people who were on waiting lists for access to ASL services[2]:		
▪ Awaited their turn	69.4	63.2
▪ Resorted to other behaviors (recourse to other public hospitals, accredited hospitals or private clinics with shorter waiting lists or paid private services)	30.6	36.8
WAITING LISTS FOR HOSPITAL ADMISSION	*2018*	*2019*
– Percentage incidence on the adult population and number of people who had one or more experiences with waiting lists for access to hospital admissions during the last twelve months[3], of which:	8.0 *(4.1 mil.)*	16.9 *(7.9 mil.)*
– Behaviors adopted (over the last twelve months) by people who were placed on waiting lists for hospital admission[4]:		
▪ Patiently awaited their turn	68.9	42.7
▪ Other types of behaviors adopted (recourse to other public hospitals, accredited hospitals, facilities outside the Region, etc.)	31.1	57.3
WAITING LISTS FOR *DAY HOSPITAL* AND *DAY SERVICE* SERVICES		
– Percentage incidence on the adult population and number of people who had one or more experiences with waiting lists over the last twelve months, of which[5]:		*2019*
▪ For *day hospital* services		10.8 *(5.5 mil.)*
▪ For *day service* outpatient medical services		12.7 *(6.4 mil.)*
▪ For *day service* outpatient surgery services		9.8 *(5.0 mil.)*
– Behaviors adopted by people who were placed on waiting lists for services in *day hospital* e in *day service*[6]:	*Services for serious medical needs*	*Services for minor medical needs*
▪ Patiently awaited their turn	61.5	60.6
▪ Alternative solutions were found	32.0	35.5
▪ Services were postponed or forwent	6.5	3.9

./.

(Continued) *Table 9 – Significant increase of experiences with waiting lists by people between 2018 and 2019 (% val)*

Phenomena	*Data*
POSSIBLE MULTIPLE EXPERIENCES WITH WAITING LISTS	
– Percentage incidence on the total number of people who, having experienced one or more waiting lists for ASL services in the last twelve months, also had experiences with waiting lists for other services, such as[7]:	*2019*
▪ One or more experiences with waiting lists for hospital admissions	37.3
▪ One or more experiences with waiting lists for *day hospital* services	22.8
▪ One or more experiences with waiting lists for *day service* outpatient medical services	26.3
▪ One or more experiences with waiting lists for *day service* outpatient surgery services	21.6
▪ One or more experiences for access to the public Emergency Room	47.6
– Average number of experiences with one or more waiting lists per respondent in addition to those relating to local health authority services	1.6

(1) See Part Two/Table 19, p. 151.
(2) See Part Two/Table 23, p. 157.
(3) See Part Two/Table 25, p. 160.
(4) See Part Two/Table 26, p. 163.
(5) See Part Two/Table 34, p. 177.
(6) See Part Two/Table 35, p. 178.
(7) See Part Two/Table 40, p. 191.

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Again on the matter of waiting lists, it is impossible to overlook the experiences with access to the Emergency Room (Table 10). As can also be seen in the case of the use of Emergency Room services, there was an increase, between 2018 and 2019, of the experiences (one or more) over the past twelve months. In fact, the first data group of the Table mentioned shows that:

- with reference to public hospitals, it went from 21.4% of the adult population (10.8 million units) in 2018 to 26.6% (13.5 million units) in 2019;
- and for accredited hospitals, it went from 4.1% (2.1 million units) to 7.9% (4 million units);
- and finally, for paid private clinics, it went from 3.2% (1.6 million units) to 4.7% (2.4 million units).

Thus, in theory, the year 2019 witnessed a flow of 19.9 million people aged 18 years and older who had one or more experiences with access to the Emergency Room. In this regard, however, it should be remembered that there is the possibility of multiple accesses at different hospitals (public, accredited and paid private clinics). And this is true regardless of whether there exists an official Emergency Room service in the aforementioned facilities, as in the event of urgent need, patients go to the nearest facility, at least for the first services. On this issue, we also estimated the possible overlapping of accesses made at different types of facilities, from which it could be seen that for people who had experienced Emergency Room services at a public facility[3]:

- in 25.5% of cases they also used an Emergency Room service at accredited hospitals;
- and 16.1% of them had experience with the Emergency Room at paid private clinics.

In addition to having witnessed a significant increase in access to the Emergency Room between 2018 and 2019, there was also an increase in the waiting times both to obtain the first visit and to complete any necessary additional exams. Here we can see how (see the second group of data in Table 10):

- in the first case (i.e. before being visited) waits of up to 3 hours dropped from 79.3% in 2018 to 67.9% in 2019 and, in parallel, there was an increase from 20.7% to 32.1% of waits longer than 3 hours, which could even extend to 10 hours and more (in particular the amount of people who had to wait longer than 5 hours almost doubled, rising from 7.4% in 2018 to 13.1% in 2019);

[3] See Part Two/Table 29A, p. 170.

Table 10 – Increase of accesses to the Emergency Room and waits by the adult Italian population over the last twelve months (% val)

Phenomena	*Data*			
– Percentage incidence and A.V. of people who actually had access to the Emergency Room one or more times, according to the type of hospital used[1]:			*2018*	*2019*
▪ Public hospitals			21.4 *(10.8 mil.)*	26.6 *(13.5 mil.)*
▪ Accredited hospitals			4.1 *(2.1 mil.)*	7.9 *(4.0 mil.)*
▪ Paid private clinics			3.2 *(1.6 mil.)*	4.7 *(2.4 mil.)*

– Waiting time upon latest visit to the Emergency Room during the last twelve months[2]:	*Before being visited*				*To complete any additional exams necessary*			
	2018		*2019*		*2018*		*2019*	
▪ Up to 1 hour	50.9	} 79.3	39.5	} 67.9	26.0	} 55,8	18.2	} 46.7
▪ Over 1 hour and up to 3 hours	28.4		28.4		29.8		28.5	
▪ Over 3 hour and up to 5 hours	13.3	} 20.7	19.0	} 32.1	18.6	} 39.5	22.3	} 50.5
▪ Over 5 hours and over 10 hours (including night)	7.4		13.1		20.9		28.2	
▪ No additional exams were necessary	-		-		4.7		2.7	
Total	100.0		100.0		100.0		100.0	

– Possible multiple experiences with Emergency Room and waiting lists for the services indicated below[3]	*2,019*
▪ One or more experiences with waiting lists for local health authority services	70.2
▪ One or more experiences with waiting lists for hospital admissions	39.8
▪ One or more experiences with waiting lists for day hospital services	28.3
▪ One or more experiences with waiting lists for day service outpatient medical services	33.1
▪ One or more experiences with waiting lists for day service outpatient surgery services	26.2
– Average number of experiences with waiting lists per respondent in addition to that for the ER	2.0

(1) See Part Two/Table 29, p. 169 and Table 29A, p. 170.
(2) See Part Two/Table 31, p. 173.
(3) See Part Two/Table 40, p. 191.
Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

– in the second case (i.e. to complete the necessary additional exams) the number of people who "only" had to wait for up to 3 hours decreased (from 55.8% in 2018 to 46.7% in 2019), but that waits of longer than 3 hours and up to 10 hours and beyond, sometimes also at night, increased (from 39.5% in 2018 to 50.5% in 2019).

It should also be mentioned that accesses to the Emergency Room in the last year were particularly pronounced, compared to the overall average of the population sample, for people residing in medium and/or large cities, more for females than for males and, above all, for those who have a high level of education and who are part of an equally solid social and economic class. While the longest waits (sometimes also at night) occurred mainly in the South compared to the rest of the country.

Finally, there were also possible multiple experiences, this time beginning with Emergency Room services, to which can be added the experience of waiting lists for local health authority services, hospital admissions, for *day hospital* services or *day service* surgery and medical services (see last data group of Table 10). Overall, the number of additional experiences with waiting lists for people who experienced one or more accesses to the Emergency Room was 2.0 units and concerned:

– 70% of those who also experienced waits for local health authority services;
– 39.8% of those who experienced waits for hospital admissions;
– 28.3% of those who experienced waits for *day hospital* admissions;
– 33.1% of those who experienced waits for *day service* outpatient medical services;
– 26.2% of those who experienced waits for *day service* outpatient surgery services;

2.2. Experiences with waiting lists due to the progressive dehospitalization of services

For some time now there has been a progressive decrease in the number of admissions for acute cases that has been assumed as an explicit objective of the National Health Service to bring the ratio of the number of hospitalized patients per 1,000 inhabitants into expected parameters in line with international standards. It was (and is) reasonable to pursue greater appropriateness of services that can/must be provided by these agencies in order to better respond to the patient's specific medical need, also by taking into account

the patient's characteristics in terms of age, morbidity, family situation, territorial setting and social-cultural conditions.

In any case, the decrease has been practically continuous from 2001 to the present, with admissions for acute cases falling from 9.0 million in 2001 to 6.2 million in 2017, a drop of 31.9% (see Figure 4).

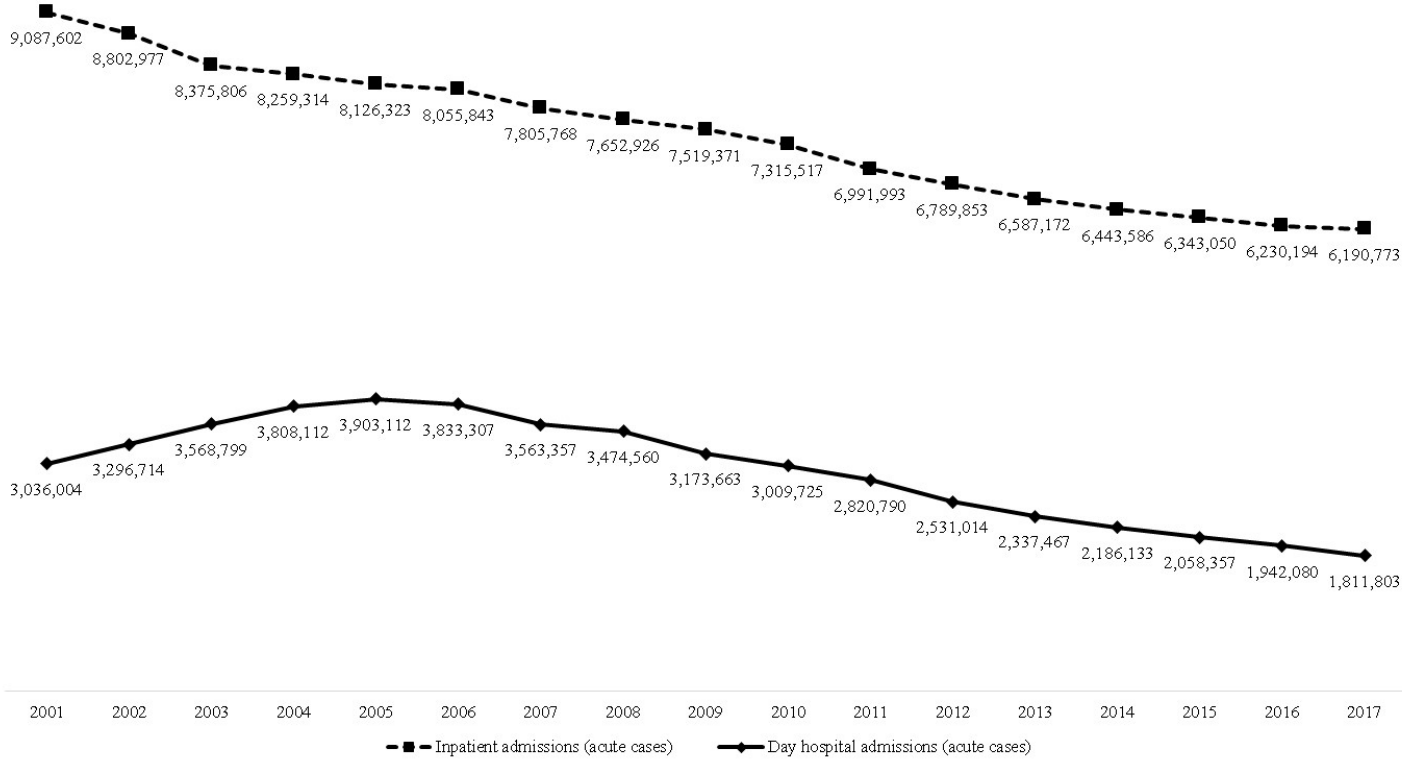
At the same time, many services were provided through the *day hospital*: 3.0 million in 2001, in continuous increase to 3.9 million in 2005, an increase of 28.6% (again see Figure 4). This has seen the first phase of the de-hospitalization process witness the "deflation" of the actual hospital admissions, while simultaneously seeing an increase in *day hospital* services, which do not include an overnight stay or any hospitality service (with patients discharged during the day, except in special cases and according to the availability of beds and staff).

However, as of 2005, *day hospital* services began to contract gradually, from 3.9 million to 1.8 million in 2017, a 53.6% decrease. Thus enters a further and different phase of the process of de-hospitalization with the introduction and subsequent growth of *day service* outpatient medical outpatient services and *day service* outpatient surgery services (which, moreover, are, in 80% of cases, performed at public or accredited hospital facilities). In this regard, however, there is no aggregate data such as that referring to inpatient admissions and *day hospital* services: consequently we must content ourselves with estimates possibly based on surveys (as was done specifically for this Report).

In this regard, Table 11 contains the data relating to an ad hoc survey conducted in October 2019 with a group of privileged witnesses, made up of the AIOP Regional Presidents (in 20 Regions or Autonomous Provinces). Their assessments confirm that, following the contraction in *day hospital* services:

a) day service *outpatient medical services* "greatly + somewhat increased", as well as an additional 37.5% which "remained stable"; this was also seen – albeit in a more pronounced way – for the *day service* outpatient surgery services which increased "greatly + somewhat" in 78.9% of cases (and remained stable only in 21.1% of cases);
b) patient expense sharing through co-payment charges or medical referral charges for *day service* (both outpatient medical and outpatient surgery) services grew significantly in 36.8% of cases and remained stable in a further 57.9%: and the average amount of this expense, for each individual *day service*, is estimated to be EUR 36-51;
c) a summary evaluation of the progress of the ongoing de-hospitalization process (which initially saw inpatient admissions for acute cases decrease

Fig. 4 – Trend of inpatient admissions and day hospital admissions for acute cases from 2001 to 2017



Source: *data from the Ministry of Health*

Table 11 – Evaluation of the de-hospitalization process: from inpatient admissions to day hospital healthcare services and day service outpatient medical and surgical services[1]

Phenomena	*Data*	
	Greatly + Somewhat increased	*Remained stable*
– Trend of *day service* outpatient medical services	56.2	37.5
– Trend of *day service* outpatient surgical services	78.9	21.1
	Has increased greatly	*Has remained more or less stable*
– Trend of patient cost sharing through co-payment and medical referral charges, etc., for *day service* (both outpatient medical and surgical) services	36.8	57.9
– Average amount of patient cost sharing for each individual *day service* (outpatient medical or surgical) services		EUR 36-51
	Yes, of course.	*I think so*
– Evaluations regarding the existence of an ongoing de-hospitalization process which has seen a decrease in inpatient admissions for acute cases in favor of *day hospital* healthcare services and then, a decrease in the latter and a rise in *day service* outpatient medical and/or surgical services	55.0	25.0
– Degree of acceptance among patients and their families of the de-hospitalization process, from inpatient admissions to *day hospital* healthcare services and *day service* outpatient medical and surgical services:	*Substantially acceptable*	*Accepted with difficulty*
▪ Transition from inpatient admissions to *day hospital* services	44.4	38.9
▪ Transition from *day hospital* services to *day service* outpatient medical and/or surgical services	45.0	35.0

(1) This information is take from an ad hoc survey carried out in October 2019, with a group of privileged witnesses, made up of the AIOP regional Presidents (involving 20 Regions and/or Autonomous Provinces).

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

in favor of *day hospital* services and then a decrease in these in favor of *day service* services) is fully confirmed by 80% of respondents;

d) the level of acceptance among patients and their families of the aforementioned de-hospitalization process (first towards the *day hospital* and then to the *day service* services) has been deemed to be substantially accepted, from respondent statements, by just under half of the users, while another 35%-40% accepted it with some difficulty.

Moreover – as already mentioned – most of the *day service* services (both medical and surgical) continue to be offered within hospitals (whether public or accredited) precisely because they are complex services: thus, we are dealing with the same services provided in the same place as before, albeit with different names and to which must be added co-payment or medical referral charges.

Obviously, requesting *day hospital* or *day service* outpatient medical or even *day service* outpatient surgery services does not make it possible to avoid the waiting lists as described in section 2.1 above, which reported how the adult population has had one or more experiences with waiting lists over the last twelve months[4]:

- 10.8% of cases for *day hospital* services (5.5 million people);
- 12.7% of cases for *day service* outpatient medical services (6.4 million people);
- 9.8% of cases for *day service* outpatient surgical services (5.0 million people);

In this regard, it is worth remembering that it was possible to have been placed on a waiting list, but then alternative ways were sought at other public or accredited hospitals or even at paid private clinics: such choices affected 30% to 35% of respondents with serious or minor medical needs. It was also possible that the services were postponed or completely foregone in 4%-7% of cases, again depending upon the type of need.

2.3. Increasing difficulties in terms of the choice of facility and length of stay during the hospitalization

A further inconvenience experienced by patients and their families has to do with the "connection" systems, which appear to be weak and also to differ, not only from territory to territory, but also from hospital to hospital and, above all, have grown consistently worse over the years.

[4] See table 9 above, p. 48.

The transition from one condition to another should entail the ability to take advantage of a fluid path actively managed by the primary healthcare services and hospital services that should "talk to each other" in a consistent and procedurally defined manner, as well as support the patient and family members when decisions must be made:

- when it is necessary find the most appropriate hospital;
- when it is necessary to deal with different departments, medical operators and nurses, and different departments throughout the stay in the hospital;
- and when it is necessary to identify the post-hospital facilities that may be required after hospitalization such as rehabilitation, long-term care, assisted living homes, or home care services.

If for now we consider the first two cases in point (that of communication between primary healthcare services and hospital services and that of the many internal connections inside the healthcare facilities), then we may immediately observe the extent of the inconveniences experienced by the *caregivers* for themselves and/or other family members over the past twelve months and the relative escalation of these inconveniences over time.

In fact, as can be seen in Table 12 (first group of data):

- on the one hand, in 2019, the lack of information continued to weigh heavily when choosing a hospital facility, starting from a lack of direction from the general practitioner (in 39.2% of cases!), to not being able to find reliable information about the hospital, doctors and hospital services in general, in order to be able to choose the most appropriate facility (in 45.1% of cases);
- and, on the other, again in 2019, the problem of having waited too long as there was no place available at the time of need (in 50.8% of cases), with the consequence of having had to change facility from the one considered most suitable in order not to have to postpone the patient's surgical and/or treatment needs (in 38.2% of cases); but, as a possible reaction, an attempt was also made to use personal knowledge and relationships in order to shorten the wait to obtain admission in a specific department where a trusted doctor worked (in 31.6% of cases) or even the Emergency Room (or 118 emergency service) was used as an "alternative" method in order to be able to take advantage of emergency hospital admission instead of the far too lengthy normal inpatient admission process (in 31.4% of cases).

Two further difficulties may be added to these main difficulties, namely:

- the significant increase over time of the medical needs mentioned above, if the results of same surveys carried out in 2014 and 2017 are compared:

in fact if we compare the difficulties reported in 2019 with those described in 2014, the situation becomes much more problematic, given that the difficulties worsen from 30% and up to 60% or more;

– furthermore, the further deterioration, with respect to the average value of the sample responses, is declared by the *caregivers* who reside in the South, for a (repeated) confirmation of an inadequate "average level" of the "connection" systems when entering hospital facilities.

The inconveniences encountered when choosing a hospital described thus far are similar to the inconveniences that must be dealt with during the actual hospitalization period. In this regard, the difficulties have been grouped into three areas (see second, third and fourth group of data in Table 12):

a) there are those that have to do with the patient's daily life within the facility: for example, knowing who to ask for information, sensing inadequate "humanization" in the treatment or the lack of professional enthusiasm by the medical staff and nursing, experiencing a certain disorientation with respect to the complexity of the hospital or having to experience other very concrete problems such as having been temporarily placed on beds in the corridor (and sometimes for a long time) while waiting for a place to open up in the ward; or even having to bring linens from home because they were not available or were inadequate. These problems are in definite increase if we compare the 2014 responses to those of 2017, and indeed tend to stabilize in 2019 in their intensity (thereby assuming a structural characteristic). To all this it must be added that the situation worsens further compared to the average of the sample analyzed this year when considering the responses of the *caregivers* residing in the South, as can be seen from the last column of the second section of Table 12;
b) those that arise due to the sometimes too-accelerated de-hospitalization process (see third group of data in Table 12), as a result of which the patient may run the risk of having to return to hospital due to inadequately communicated post-hospital therapy or an inadequate connection with the general practitioner (28.2% and 29.3% level of agreement of among respondents, respectively). It may also be stated that the discharge was too quick and therefore the patient was still not strong enough (42.4%), or the patient had to return to the hospital due to clinical consequences that occurred after the surgery or after the hospital care (32.4%): this underlines the lack of a mid-level hospital facility where it is possible to complete the treatment path, especially in the case of serious illnesses followed by too short a stay or with excessively rapid discharges (42.9%).

Again in this case there is an increase in the difficulties reported in 2017 compared to those of 2014, followed by a further deterioration in 2019

Table 12 – The growing weakness of the connections at the time of entry and subsequent stay in the hospital, based on the experiences of the caregivers *and/or other family members (% val.)*

Phenomena	*Data*			
			2019	
DIFFICULTIES WITH ACCESS TO HOSPITALS ("Very + Fairly important" opinions)[1]	*2014*	*2017*	*Total*	*South and Islands*
▪ Not receiving any information from the primary care physician, who was unable to direct the patient to the most suitable hospital	27.3	32.9	39.2	49.3
▪ Not finding reliable information about the hospital, doctors, hospital services, in order to choose the most appropriate facility	29.7	38.2	45.1	56.3
▪ Having waited too long (waiting lists) because there was no room when the need arose	24.2	54.1	50.8	57.5
▪ Having had to change hospital facility from the one deemed most suitable (because recommended by a trusted doctor and/or other people, or because it is more comfortable and close to home or for other reasons) in order not to have to wait too long with respect to the surgical and/or treatment needs	24.0	37.1	38.2	49.1
▪ Use of personal contacts and relationships to shorten the wait, gain admission to a particular department where a trusted doctor works, etc.	37.9	30.2	31.6	46.5
▪ Use of the Emergency Room (or emergency number 118) to take advantage of emergency admission, as the admission would not have been possible or would have taken too long	24.6	26.2	31.4	39.2
			2019	
THE MOST SIGNIFICANT DIFFICULTIES DURING HOSPITAL STAYS ("Strongly + somewhat agree" opinions)[2] Examples:	*2014*	*2017*	*Total*	*South and Islands*
▪ Did not know who to ask for information about the patient's progress (the Head Physician was difficult to get a hold of or was present for too short a time; the other doctors were poorly informed; there was not a single contact doctor and there was the feeling that the patient's situation was not adequately known by all the doctors in the ward; etc.)	43.4	57.6	52.6	61.1
▪ There was no effective/adequate "humanization" in the treatment of the patients (in terms of listening, information on the progress of the disease or intervention; information regarding care; information on post-hospitalization needs; etc.)	44.6	57.0	56.4	70.5
▪ There was a lack of the sense of "professional enthusiasm" among the medical staff (other things matter more: attention to the illness rather than to the patient; attention to superiors, career, earnings, "chatter" among colleagues about personal/union matters; etc.)	40.2	54.0	52.2	62.9
▪ General disorientation with regard to the organization of the hospital (hierarchies of doctors and nurses to be complied with; knowledge of what can and cannot be done; not knowing exactly who to ask for information; etc.)	39.5	54.7	49.2	58.8
▪ Temporary placement on beds in the corridor (and for a long time), while waiting for a place in the ward to open up	12.9	26.2	34.3	39.6
▪ Bed linen had to be supplied from home, because it was not provided or was inadequate	10.3	19.7	26.6	41.0

./.

(Continued) *Table 12 – The growing weakness of the connections at the time of entry and subsequent stay in the hospital, based on the experiences of the* caregivers *and/or other family members (% val.)*

Phenomena	*Data*			
			2019	
DIFFICULTIES ARISING DUE TO THE ACCELERATED DE-HOSPITALIZATION PROCESS ("Strongly + somewhat agree" opinions)[3]	*2014*	*2017*	*Total*	*South and Islands*
– There was a risk of having to return to the hospital because the proper post-hospitalization therapy had not been clearly communicated to the patient and/or his family	20.0	20.9	28.2	36.0
– There was a risk of having to return to the hospital as there was no adequate connection with the general practitioner (family doctor)	21.5	23.2	29.3	34.1
– The discharge was too quick and the patient was not yet sufficiently recovered	16.4	30.5	42.4	39.9
– Patient had to be re-admitted to the hospital due to clinical consequences that arose following the intervention and/or treatment at the hospital	24.5	23.5	32.4	30.9
– There was no mid-level hospital facility in which the patient could continue treatment, receive post-operative or post-treatment assistance, especially in the case of severe illnesses: the hospital stay is now too short and discharges too quick	15.4	28.9	42.9	38.6
			2019	
INFORMATION AND GUIDANCE DIFFICULTIES ("Strongly + somewhat agree" opinions)[3]	*2014*	*2017*	*Total*	*South and Islands*
– There is a lack of adequate information on "post-hospitalization" in order to choose the most appropriate path to permit the patient to feel well or, at least, as well as possible	25.4	34.4	42.8	41.0
– There is no good and discharge procedure specifically outlining the commitments that arise after hospitalization, so that patients and their families are left to fend for themselves (regarding the therapy to be followed, possible rehabilitation facilities to be located, possible guidance relating to volunteer assistance programs, appointments that may need to be made at least during the initial period, and procedures to be followed for any emergencies, etc.)	31.0	33.7	44.5	54.2
– There is no single director handling the actual needs of the patient: preventive orientation with respect to the choice of the hospital to accompaniment of the patient during the hospitalization period up to the management of the post-hospital phase, with the related connections to rehabilitation, long-term care, social and health care facilities, etc. downstream.	30.4	37.4	49.6	54.4

(1) See Part Three/Table 12, p. 222.
(2) See Part Three/Table 14, pp. 228-229.
(3) See Part Three/Table 22, pp. 255-257.
Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

which in turn appears more acute through the first two cases indicated in the third data group of Table 12;

c) finally, there is the problem with information and guidance (see the last group of data in Table 12) which shows a lack of appropriate information regarding "post-hospitalization" in order to be able to choose the most suitable path for the patient (42.8%) and, even more so, there is no good and discharge procedure specifically outlining the commitments that arise after hospitalization, so that patients and their families are left to fend for themselves (44.5%); or, even greater, there is no "single director" handling the actual needs of the patient: from preventive orientation with respect to the choice of the hospital to accompaniment of the patient during the hospitalization period up to the management of the post-hospital phase (49.6%).

Also in terms of information and guidance, there is a more critical assessment in 2017 than in 2014, which further increases if we consider 2019 and in particular the assessment of the difficulties mentioned by the *caregivers* who live in the South.

Thus it can be seen that the issue of the unsatisfactory "average level" also involves the difficulties experienced in terms of inadequate, fragile, random "connection" systems or those left up to the patients and the *caregivers* to deal with any problems, not infrequently with help that comes from the goodwill of the operators.

2.4. The accentuation of the difficulties in the transition from hospitalization to post-hospitalization and the use of rehabilitation facilities

The weakness of the connections between hospital and post-hospital care represents a particularly delicate area of possible difficulties as confirmed by the *caregivers* through their opinions (expressed as "very + quite important"), shown in the first group of data in Table 13), which reveal that:

- 1/3 of the respondents (33.9%) assessed how difficult it was first of all to find a public or accredited long-term care facility and another third (33.3%) were thus forced to resort to private facilities paid for by the family;
- just under 1/3 (30.3%) said that the rehabilitation facilities did not prove adequate enough with respect to the type of surgery they underwent or the treatments previously received in the hospital or they were directed towards non-intensive rehabilitation facilities that were not specialized

enough for the patient's needs (30.8%); or, again, they were directed towards theoretically adequate rehabilitation structures, but whose services did not ultimately turn out to be satisfactory (30.9%);

– and finally, it may also have happened (in 27.7% of cases) that the patient had to return to the hospital, since there was not an adequate connection with the social assistance services for the post-hospitalization phase, that is with rehabilitation or long-term care facilities, assisted living homes and/or home care services.

It might be said that there is an inadequate "average level" that is around 30% or a little higher for the various critical aspects just mentioned: and in this case the South expresses more or less similar opinions, but with some slight increase in stated difficulties: which means that the problems related to rehabilitation are somewhat across the board for the country and they are also evident in the North, in medium and/or large cities and are better noted by *caregivers* who have a medium and/or medium-high level of education and, similarly, from those who belong to an upper-middle or upper social and economic class.

Continuing on with the analysis, keep in mind that the impact of one or more experiences had over the past three years by *caregivers* and/or by other members of the "immediate" and/or "extended" family in terms of the use of rehabilitation or long-term care facilities, assisted living homes and home care services, is 6.4% for the first group and 10.2% for the second group, that is 1.6 million households for *caregivers* and 2.6 million households for the other members, respectively (see second group of data in Table 13). Of course, there is an area of potential overlap concerning the families affected, but this situation certainly does not lighten the burden on the *caregivers* who have to manage their own medical needs and those of two other families, namely those of the immediate and the extended family.

If we go from the overall experiences over the past three years had by the *caregivers* and/or other members of the "immediate" or "extended" family with rehabilitation or long-term care facilities, assisted living homes and home care services to the actual numbers of yearly hospital admissions, the relative trend is summarized in Figure 5, which shows that:

– inpatient admissions to rehabilitation facilities gradually increase over time from 243,000 in 2001 to 316,000 in 2017 (an increase of 30.0%); while rehabilitation performed as part of *day hospital* services, following growth between 2001 and 2006 (from 55,000 to 71,000 units), begins to decline, reaching 30,000 units in 2017 (with a decrease in the sixteen years of 44.6%);

Table 13 – The specific weakness of the connections regarding the transition to rehabilitation facilities, for caregivers *and/or for other family members (% val)*

Phenomena	*Data*	
	2019	
	Total	*South and Islands*
– Difficulties relating to the transition from hospitalization to the post-hospitalization phase ("Very + quite important")[1]:		
▪ It was difficult to find a public or accredited long-term care facility	33.9	35.4
▪ Due to the difficulties of finding a public or accredited long-term care facility, it was necessary to resort to a private facility paid for by the family	33.3	32.1
▪ Post-hospitalization rehabilitation facilities were not adequate for the surgery and/or treatment previously undergone in hospital	30.3	33.6
▪ We were directed to rehabilitation facilities that were not intensive or specialized enough for the patient's needs	30.8	30.8
▪ We were directed to theoretically adequate rehabilitation facilities, but their services did not turn out to be satisfactory	30.9	31.7
▪ The patient had to return to the hospital because there was not an adequate connection with the social assistance services for the post-hospitalization phase (rehabilitation and long-term facilities, assisted living residences, home care, etc.)	27.7	29.7

	Caregiver	*Other members of the "immediate" and/or "extended" family*
– % incidence of one or more experiences in rehabilitation, long-term care, assisted living homes and home care, over the past three years, among *caregivers* and/or other members of the immediate and/or extended family[2]	6.4 *(1.6 million households)*	10.2 *(2.6 million households)*

	Caregiver		*Other members of the "immediate" and/or "extended" family*	
– Type of rehabilitation used[3]:				
▪ Cardiology	*2nd*	16.8	*1st*	55.6
▪ Orthopedic	*1st*	70.4	*2nd*	38.2
▪ Other	*4th*	13.6	*3rd*	15.6
▪ Neurological	*3rd*	14.3	*4th*	14.3

	Completely and/or somewhat adequate	*Barely sufficient and/or completely insufficient*	*Not possible to assess*
– Assessment of the quantitative adequacy (with respect to demand) of rehabilitation, long-term care, assisted living home and home care services within the home Region of the *caregivers*[4]:			
▪ Rehabilitation Facilities	29.2	24.4	45.4
▪ Long-Term Care Facilities	25.9	25.0	48.2
▪ Assisted Living Homes	23.4	23.2	52.1
▪ Home care services	22.4	25.7	50.8

./.

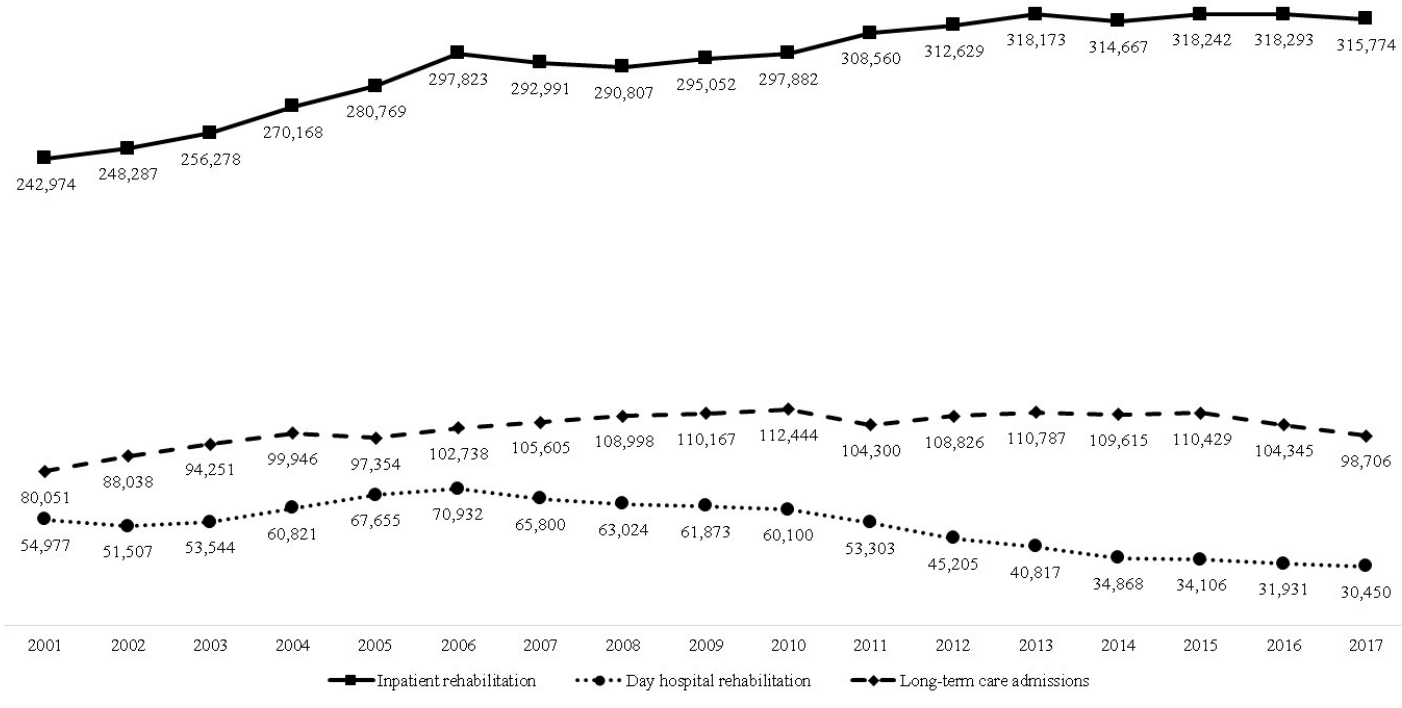
(Continued) *Table 13 – The specific weakness of the connections regarding the transition to rehabilitation facilities, for* caregivers *and/or for other family members (% val.)*

Phenomena	*Data*			
	Very + Quite satisfied		*Slightly + Not at all satisfied*	
– Level of satisfaction/dissatisfaction with respect to the services obtained among *caregivers* and/or members of the immediate and/or extended family for the following rehabilitation facilities[5]:	*Public hospital facilities*	*Accredited facilities*	*Public hospital facilities*	*Accredited facilities*
▪ Cardiology	82.2	58.0	9.9	14.8
▪ Neurology	55.0	61.3	34.3	20.0
▪ Orthopedics	68.5	70.2	22.1	13.5
– Some specific difficulties encountered by respondents in rehabilitation facilities ("Very + Quite important" opinions)[6]:	*Very + quite important difficulties*			
	Total		*South and Islands*	
▪ The stay in rehabilitation facilities turned out to be too short compared to the patient's needs	58,2		73.4	
▪ After being discharged from rehabilitation facilities it is not always easy to find a local health authority therapist who comes to the home to continue therapy or, alternatively, to find an accredited facility to accept the patient to continue the rehabilitation cycle.	60.6		73,3	
▪ Often patients do not fully recover from their injury and in many cases need repetitive rehabilitation cycles over time.	69.0		83,9	
▪ No help was received from the rehabilitation facility or social worker or specialist or family doctor on the procedures to be followed and the parties to engage in order to continue in another way, or to deal with the subsequent rehabilitation cycles	57.1		81,6	
▪ No help was received dealing with the bureaucratic procedures relating to the recognition of the invalidity (total or partial) and for access to Law 104 by the hospital or rehabilitation facility that discharged the patient by the social worker, the specialist, or the family doctor	58.6		80,5	
	Rehabilitation Facilities		*Long-Term Care Facilities*	
– Behaviors and orientations of *caregivers* regarding the use of rehabilitation and/or long-term care facilities in Italian Regions other than their home Region[7]:	*Total*	*South and Islands*	*Total*	*South and Islands*
▪ Effective use of extra-regional facilities or at least a willingness to do so	40.4	58.1	47.3	66.2
▪ Did not make use of extra-regional facilities though they were willing to do so due to the expenses to be incurred for the transfer of family members + Did not make use of extra-regional facilities but, if there was a need, would evaluate the possibility	22.1	35.8	20.8	29.0
▪ Did not make use of extra-regional facilities because they were not informed of this possibility + Regional facilities were sufficiently adequate	50.2	36.5	37.5	26.7

(1) See Part Three/Table 22, pp. 255-257.
(2) See Part Three/Table 23, p. 258.
(3) See Part Three/Table 24, p. 260.
(4) See Part Three/Table 26, p. 264.
(5) See Part Three/Table 28, p. 268.
(6) See Part Three/Table 30, p. 271 and Table A30 / Section 4 of the Appendices, p. 467.
(7) See Part Three/Table 31, p. 274 and Table A31.1 and Table A31.2 / Section 4 of the Appendices, pp. 468-471.

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Fig. 5 – Trend in the number of rehabilitation admissions (inpatient and day hospital), and long-term care admissions (Data 2001-2017)



Source: *data from the Ministry of Health*

– and long-term care admissions, on the other hand, grew more slowly, going from 80,000 in 2001 to 99,000 in 2017 (an increase of 23.3%).

Looking at the data from the survey conducted on *caregivers*, those who said they had one or more experiences with rehabilitation facilities (for themselves and/or for other members of the immediate and/or extended family) also had experiences with long-term care facilities (in 14.3% of cases), assisted living homes (in 9.5% of cases), and with home care services (in 17.4% of cases)[5].

The different types of rehabilitation used can be seen (see third group of data in Table 13) from the *caregivers* who mainly used orthopedic rehabilitation, which is ranked in 1st place (with 70.4% of responses), followed, in order of importance, by cardiac rehabilitation (2nd place, with 16.8%) and then by neurological rehabilitation (in 3rd place, with 14.3%), whereas it differs for the other members of the immediate and/or extended family (presumably with a greater presence of the elderly), where 1st place is occupied by cardiac rehabilitation (55.6%) followed by the orthopedic (38.2%), and then by the neurological rehabilitation (14.3%).

A final note regarding the assessment of post-hospital services is merited. The fourth group of data in Table 13 takes into consideration the adequacy of the amount of rehabilitation facilities with respect to the demand, and whether they are long-term care facilities, assisted living homes or home care services within the home Region of the *caregivers*: in this case the greatest number concerns the first type of facilities (i.e. rehabilitation centers) indicated by 29.2% of the respondents, followed by long-term care facilities (25.9%), assisted living homes (23.4%) and finally, by home care services (22.4%). Yet the assessment of barely sufficient and/or completely insufficient must also be recalled, an opinion that presents percentages that are substantially similar to previous ones, or approximately 1/4 of *caregivers.* In fact, these state that the number of facilities available compared to the demand was barely sufficient and/or completely insufficient: 24.4% for rehabilitation facilities, 25.0% for long-term care facilities, 23.2% for assisted living homes, and 25.7% for home care services. Finally, while quite understandable, about half of the sample was unable to provide an assessment of adequacy in this regard.

Finally, we also wanted to collect the opinions regarding the level of satisfaction/dissatisfaction, taking into account the services obtained in the specialized rehabilitation facilities (cardiology, neurology and orthopedics): in this case the public facilities for cardiac and orthopedic rehabilitation ranked

[5] See Part Three/Table 23A, p. 260.

better, whereas accredited facilities ranked better for neurological rehabilitation (see fifth group of data in Table 13).

Regarding some specific difficulties encountered by the respondents with rehabilitation facilities, it can be noted (from the sixth group of data in Table 13) that these exceed 50% and sometimes even 60% among the average of the sample of *caregivers*, but they rise significantly as specifically regards the South: once again, therefore, the specific difficulties of this territory detract more from the overall "average" performance level.

Finally, the actual use and/or the tendency to make use of other rehabilitation and long-term care facilities outside the home Region over the last three years, affected 40.4% of the respondents in the first case and 47.3% in the second case. Although it must be said immediately that the 40.4% figure contains a large percentage (16.8%) of people who actually turned to these facilities, the remaining 23.6% expressed more of a positive willingness than actually turned into reality: either because they gave up due to excessively lengthy waiting lists, or because the local health authority did not grant authorization, or because the opportunity was seriously evaluated but was then not pursued.

Bear in mind that the second option as a whole affected 22.1% of the *caregivers* for rehabilitation facilities and 20.8% for long-term care facilities: while 50.2% and 37.5% of the respondents did not use the two types considered, since they were not informed of the fact that they could go to facilities outside the Region or because they believed that the facilities present in their territory were sufficiently adequate to the patient's needs.

The critical evaluations of the *caregivers* residing in the South are – as usual – much more pronounced than the average of the sample, both as regards alternative behaviors and alternative tendencies with respect to the use of the facilities present in their home Region. Naturally, a medium-high level of education and an upper-middle social-economic class among the people weighs significantly on the effective use and on the propensity to use facilities outside the home Region by the *caregiver* respondents.

In concluding what has been mentioned so far, it is necessary to keep in mind some important points concerning the rehabilitation facilities that can be summarized as follows:

- first of all, there is a problem with growing demand due to the progressive aging of the population and the frequent lack (quantitatively and qualitatively in the local territories of the patients or those nearby) of various types of suitably structured facilities;
- then there are increasing complexities and different needs of patients which it is not easy to respond by means of residential, semi-residential

outpatient and home rehabilitation services: also because these needs vary over time for both patients and their families and more and more often there is a need to provide flexible services that alternate between residential and non-residential);

- then there is a key problem connected to a connection that does not appear to be sufficiently "fluid" between the rehabilitation and long-term care facilities, assisted living homes and home care services with primary healthcare and with hospitals, on the one hand, and between different post-hospital facilities, on the other: and it must be recognized that it is not at all easy to manage the specific (and continuously changing) situation of patients, especially the elderly who end up inevitably "bouncing" from one facility to another and and within their own family and/or that of their children, which is not always capable of meeting the demanding and changing needs of the patient; to all this is added that increasingly problems arise also for non-elderly people who do not have a family present and/or available to be a reference point – even partially – for hospital and/or post-hospital assistance;
- the consequence is that any inadequacies end up generating – among other things – a number of "returns" to hospitals that is precisely in line with the inadequate rehabilitation responses: in short, the weakness of the "connection" systems between hospital care and post-hospital care remain, as was extensively described in section 2.3 above;
- and, to conclude, there is also a problem of fees (and of "ceilings" placed on them) for the accredited facilities, which offer about 75% of rehabilitation services; the aforementioned rates (according to the mechanisms for setting rates included in the draft Ministerial Decree on the appropriateness criteria, which are also in the assessment phase), would lead most of the cases treated, especially those relating to orthopedic rehabilitation, to be downgraded to the C category, which corresponds to the so-called "extensive" rehabilitation: with inevitable consequences on the services for patients, but also on the economic balance of accredited facilities.

2.5. Confirmation of a differentiated "average" through the levels of satisfaction/dissatisfaction with healthcare and services

At the end of the assessment of some specific inconveniences, we wanted to reconstruct an overview of the satisfaction/dissatisfaction opinions with the services provided by users as well as by the general population (Table 14).

To begin we consider the first two groups of data, which show:

a) first of all, the opinions of satisfaction/dissatisfaction with the services actually reported by that part of the population that has actually used public hospitals, accredited hospitals and/or paid private clinics over the last twelve months: in this case the level of satisfaction ("very + quite satisfied") is 76.5% with respect to public hospitals, but rises to 90.6% for accredited hospitals and drops to 73.9% for paid private clinics; the complementary opinions of dissatisfaction ("slightly + not at all satisfied") are obviously more marked for public hospitals, reaching 23.3% compared to 9.1% for accredited hospitals and 8.5% for paid clinics: and the greatest dissatisfaction is expressed by respondents in the South;
b) if we go from members of the population who have actually used one of the types of hospitals, and look at the opinions of the population as a whole (see second data group of Table 14), it is possible to see how the satisfaction levels are lower than those stated in the previous case: which is regularly confirmed by all the surveys conducted in the various *Health&Hospital* Reports, demonstrating the fact that there is a propensity to be more critical when it comes to hospitals in general than when they are actually used; in fact, the overall satisfaction rates drop compared to those of the previous case, but still leave accredited hospitals in the lead (81.3% being "very + quite satisfied"), while – consequently – the negative opinions increase compared to those of actual users.
   In this case, the South provides the most severe ("slightly and/or completely negative") critical opinions for public hospitals (36.0%) and more limited for accredited hospitals and paid private clinics;
c) if we then move on to the opinions provided, again by the population as a whole, with respect to the health and social-welfare services of the home Region, regardless of whether the respondents have or have not had the opportunity to use the relative services in the last twelve months (see third group of data of Table 14), it can be observed that:
   - the level of satisfaction decreases further compared to the previous case (inevitably becoming even more generic), concerning just over half of the services provided by the local health authority (directly or through accredited centers), affecting 49.6% of public hospitals, 47.2% of accredited hospitals and dropping to 36.4% for specialized clinics;
   - as a consequence, negative opinion ("slightly + not at all satisfied") rise significantly for public hospitals (29.3%) and appear to be much more limited for accredited hospitals (18.2%) and for paid private clinics (12.8%);

– obviously the South expresses itself, in terms of negative opinions, more critically than the overall average of the national sample.

As for the services received from the *day hospital* and/or *day service* (see fourth group of data in Table 14), there is a much more favorable satisfaction rating if the accredited facilities are used compared to the public ones, with a significant difference in the opinions in favor of the latter: therefore it is logical that the opposite opinion (that of dissatisfaction) is focused essentially on public facilities rather than on accredited ones, except in the case of *day service* outpatient surgery services.

Finally, the last group of data in Table 14 takes into consideration the satisfaction/dissatisfaction opinions of that portion of the population that has actually had (one or more) experiences with the Emergency Room over the last twelve months. In this case, a deterioration between 2018 and 2019 is completely evident, with a decrease in the positive opinions (from 65.1% to 59.7%) and an increase in the negative ones (from 29.0% to 37.5%): the latter two percentages are clearly higher in the South, rising from 37.9% in 2018 to 45.9% in 2019, respectively. This reaffirms the particular delicacy of the Emergency Room facilities, which see the inefficiencies of primary healthcare "dumped" on them, as well as those of the waiting lists for inpatient admissions that drive people to use the Emergency Room service as a "shortcut" to gain quicker access to the services required and/or trusted professionals (without having to resort to paid private services).

In conclusion, therefore, the collected opinions provide further indications that help better understand the inadequate "average level" of the services: with particularly critical peaks for public facilities (which can concern 30% or more of the various types of services offered), and for the South, where the territorial disadvantage can see the overall level of dissatisfaction go well beyond the average of 30%, as can be seen in the last column of data in Table 14.

Table 14 – The satisfaction/dissatisfaction opinions of users and citizens as confirmation of a still incomplete "average level" (% val.)

Phenomena	*Data*		
– Level of satisfaction/dissatisfaction with hospital services received the last time over the past twelve months by actual users[1]:	*Very + Quite satisfied*	*Slightly + Not at all satisfied*	
		Total	*South and Islands*
▪ Public hospitals	76.5	23.3	31.6
▪ Accredited hospitals	90.6	9.1	22.3
▪ Paid private clinics	73.9	8.5	40.0
– Summary of opinions of the population on the different types of hospital facilities[2]:	*Very + Quite satisfied*	*Slightly + Completely negative*	
		Total	*South and Islands*
▪ Public hospitals	66.4	33.6	36.0
▪ Accredited hospitals	81.3	18.7	17.7
▪ Paid private clinics	75.3	24.7	15.2
– Level of satisfaction/dissatisfaction of the population with respect to the health and social assistance services of the home Region, regardless of whether or not they had the opportunity to use the relative services in the last twelve months[3]:	*Very + Quite satisfied*	*Slightly + Not at all satisfied*	
		Total	*South and Islands*
▪ Services of the local health authority facilities (Polyclinics, etc.)	54.5	23.4	30.2
▪ Services of the centers accredited by the Local health authority (Polyclinics, etc.)	52.3	19.1	28.0
▪ Public hospital services	49.6	29.3	36.5
▪ Services of accredited hospitals	47.2	18.2	24.6
▪ Paid private clinic services	36.4	12.8	47.7
– Level of satisfaction/dissatisfaction of the population with relating to *day hospital* and *day service* outpatient (medical and surgical) services used in the past twelve months[4]:	*Very + Quite satisfied*		*Slightly + Not at all satisfied*	
	Public hospital facilities	*Accredited facilities*	*Public hospital facilities*	*Accredited facilities*
▪ *Day hospital* services actually received	63.2	79.6	36.2	18.8
▪ *Day service* outpatient medical services actually received	66.3	86.2	31.8	11.9
▪ *Day service* outpatient surgery services actually received	91.0	80.6	1.5	17.0
Level of satisfaction/dissatisfaction of the population relating to actual experiences had in the Emergency Room of one or more hospitals the last time this happened over the last twelve months[5]:	*Very + Quite satisfied*	*Slightly + Not at all satisfied*	
		Total	*South and Islands*
▪ Year 2018	65.1	29.0	37.9
▪ Year 2019	59.7	37.5	45.9

(1) See Part Two/Table 4, p. 114 and Table A4/Section 3 of the Appendices, p. 407.
(2) See Part Two/Table 13 (Opinions net of non-responses), p. 131 and Table A13/Section 3 of the Appendices, p. 414.
(3) See Part Two/Table 28 (Opinions net of non-responses), p. 166.
(4) See Part Two/Table 38 (Opinions net of non-responses), p. 183.
(5) See Part Two/Table 33 (Opinions net of non-responses), p. 175 and Table A33/Section 3 of the Appendices, p. 423.
Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

3. The persistence of problems related to economic and financial resources

3.1. The evident phenomenon of system defunding

Previous sections described the basic features of a "two-sided" National Health Service.

The first is witnessing the complexity and efficacy of hospital services increase in terms of average values.

The second sees internal differentiation territorially, but also at "specific points" within each individual territory, since each individual hospital or even each individual department can display different levels of complexity and effectiveness.

The result is that the average statistical trend of complexity and effectiveness hides a different "average level" of services, in that the "average level" reflects the minimum acceptable ranking of the services and how widespread their availability is in the different territorial agencies and in the different hospital facilities.

All of this is accompanied by a defunding phenomenon that has consolidated over time, and for several years now placed Italy in a (dangerous) position behind the OECD countries as shown by the data contained in the latest *Health Data* Report (November 2019), which reveals (Table 15)[1]:

a) Italian public health spending shows an incidence on GDP of 6.5% in 2017 compared to an average among the G7 OECD countries of 9.1%, of all OECD countries of 7.5%, and of European OECD countries of 7.1%. It should also be reiterated that the downward trend is accentuated, going from 6.7% in 2015 to 6.5% in 2017, while it is "holding" for the OECD countries or even growing over the three years considered, as in Germany (from 9.3% to 9.5%) or in France (from 8.8% to 9.4%);

[1] For a more accurate evaluation, see Part Four/Section 4, p. 364 et seq.

b) and the lower incidence on GDP seen in Italy is worse than the actual situation given that Italy suffered a contraction of GDP during the first six years of the economic crisis, which was followed by a slow recovery from 2014 on.

A similar comparison, this time referring to the Total Health Expense, follows the defunding dynamics just mentioned for Italy, considering that (again see Table 15):

- in 2017 the ratio to GDP was 8.8% compared to an average of 11.4% in the G7, 9.7% of all OECD countries, and 9.3% of European OECD countries: but also with a weaker position than France (11.3%) and Germany (11.2%) in particular;
- and that the ratio to GDP for Italy has fallen over three years from 9.0% in 2015 to 8.8% in 2017, while this ratio remains substantially stable in the three-year period if we look at the average of the G7 OECD countries (at 11.4%) as well as European OECD countries (stable at 9.3%) and all OECD countries (substantially at 9.7%).

And even the outlook for 2019 for the national situation would not seem to reverse the above trend as any increase in resources will, in fact, be destined for the renewal of contracts of employees of the National Health Service and not for services aimed at patients.

Table 15 – Amount of total healthcare expenditure and public healthcare spending in relation to the GDP, comparison across countries (%)

Countries	*Total healthcare expenditure*			*Public healthcare spending*		
	2015	*2016*	*2017*	*2015*	*2016*	*2017*
United States	16.7	17.1	17.1	14.2	14.5	14.4
Japan	10.9	10.8	10.9	9.2	9.1	9.2
Germany	11.1	11.1	11.2	9.3	9.4	9.5
France	11.5	11.5	11.3	8.8	9.5	9.4
Italy	**9.0**	**8.9**	**8.8**	**6.7**	**6.6**	**6.5**
United Kingdom	9.7	9.7	9.6	7.7	7.7	7.6
Canada	10.6	10.8	10.7	7.5	7.6	7.4
Average of G7 countries (*)	11.4	11.4	11.4	9.1	9.2	9.1
Average of European OECD countries (*)	9.3	9.3	9.3	7.1	7.2	7.1
Average of all OECD countries (*)	9.7	9.8	9.7	7.5	7.6	7.5

(*) Averages are calculated as unweighted arithmetic means.
Source: *Ermeneia processing of "OECD Health Data 2019", OECD, Paris, November 2019*

At the same time, no longer paying attention to public spending but rather at the financial commitment of families, it is worth pointing out how the *out-*

of-pocket contribution of the latter has increased[2], rising from EUR 33.9 billion in 2014 to EUR 37.5 billion in 2018, for an increase of 10.5% (at current prices). But to this figure should be added the costs incurred for access to public health services (such as co-payment and medical referral charges, and other expenses), for an estimated total of around EUR 7.6 billion per year[3].

If, instead, we consider the public and accredited hospital expenditure in relation to total public healthcare spending, we can see how this ratio (Table 16) is 57.3% in 2017, and therefore higher than the average of the G7 countries (43.1%), the average of all OECD countries (44.9%) and the average of the European OECD countries (45.6%). But this ratio tends to stabilize in the three-year period 2015-2017.

On the other hand, if we consider the ratio between public and accredited hospital expenditure to GDP, Italy stood at 3.7% in 2017, i.e. at a slightly lower level than the average of the G7 countries (3.8%) but higher than the average of all OECD countries (3.3%) and the average of European OECD countries (3.2%): yet, on a lower level than, for example, France (4.1%), and the other Northern European countries such as Denmark (4.2%), Norway and Sweden (4.1%). Again in this case, while the incidence on GDP for the other countries tends to stabilize in the three years considered, in the cases of Italy and the United Kingdom there is a slight contraction.

Table 16 –Public and accredited hospital expenditure in relation to the public healthcare spending and the GDP

% Values	*Public and accredited hospital expenditure / Total public healthcare spending*			*Public and accredited hospital expenditure/GDP*		
	2015	*2016*	*2017*	*2015*	*2016*	*2017*
United States	36.7	37.0	37.1	5.2	5.4	5.3
Japan	43.4	44.0	-	4.0	4.0	-
Germany	33.2	33.1	32.3	3.1	3.1	3.1
France	46.4	43.8	43.7	4.1	4.2	4.1
Italy	**57.2**	**57.7**	**57.3**	**3.8**	**3.8**	**3.7**
United Kingdom	48.9	48.6	49.3	3.8	3.7	3.7
Canada	39.3	38.8	38.8	2.9	2.9	2.9
Average of G7 countries (*)	43.6	43.3	43.1	3.8	3.9	3.8
Average of European OECD countries (*)	45.6	45.5	45.6	3.2	3.2	3.2
Average of all OECD countries (*)	45.1	45.0	44.9	3.3	3.3	3.3

(*) Averages are calculated as unweighted arithmetic means.
Source*: Ermeneia processing of "OECD Health Data 2019", OECD, Paris, November 2019*

[2] Estimated by Istat on the basis of the expenditure by Italian families for health consumption.

[3] See Health&Hospitals/2017, Part One/Table 13, p. 73.

Shifting our attention from the international comparison to the specific Italian situation, the trend of healthcare and hospital expenditure is described by the data contained in Table 17 and Table 18, which show that:

- total public healthcare spending at current prices increased from 100.0 to 102.4 (in terms of Index Numbers) in the period 2013-2017 (Table 17): but, on the contrary, at constant prices it decreased from 100.0 in 2015 to 99.7 in 2017 (Table 18)[4];
- hospital expenditure for public institutions at current prices increased as the Index Numbers went from 100.0 in 2013 to 105.7 in 2017 and thus a little more than the total public health expenditure (Table 17): but again in this case, the increase at constant prices is minimal, going (in terms of Index Numbers), from 100.0 in 2015 to 100.7 in 2017 (Table 18)[5];
- then, hospital expenditure for accredited facilities as a whole at current prices (in terms of Index Numbers) went from 100.0 in 2013 to 102.0 in 2017 (Table 17): yet, if the indicator is that of constant prices, then there is a decrease between 2015 and 2017, going from 100.0 to 97.6 (Table 18)[6];
- and finally, the hospital spending specifically destined for accredited facilities (privately operated hospitals) increased (in terms of Index Numbers), going from 100.0 in 2013 to 101.4 in 2017 (Table 17): but, if we consider expenditure at constant prices the value fell from 100.0 to 97.9 between 2015 and 2017, remaining more or less in line with the trend in hospital expenditure as a whole (Table 18)[7].

It should be remembered that accredited hospital facilities (privately operated hospitals) have to deal with the various Regional Health Services which, when faced with the difficulty of intervening in terms of rationalizing spending and increasing the efficiency of public facilities, wind up taking action primarily on the expenditure and services provided by the aforementioned accredited facilities (privately operated hospitals): using the most diverse methods which have gradually become entrenched over time (by means of "ceilings" on the services, and rate regressions in the event the ceil-

[4] The 2015-2017 period was considered, as the GDP deflator was calculated on the basis of the new ISTAT series in a chained series with reference to 2015 (as specified in Table 4 notes).

[5] Ibidem.

[6] Ibidem.

[7] Ibidem.

Table 17 – Current health spending. Years 2013-2017 (in billions of euro + I.N. 2013 = 100.0)

Types of spending	*2013*		*2014*		*2015*		*2016*		*2017*	
	A.V.	*I.N.*	*A.V.*	*I.N.*	*A.V.*	*I.N.*	*A.V.*	*I.N.*	*A.V.*	*I.N.*
Public hospital facilities	52.244	100.0	52.744	101.0	53.847	103.1	54.566	104.4	55.226	105.7
Accredited hospitals (as a whole)	8.255	100.0	8.425	102.1	8.466	102.6	8.484	102.8	8.419	102.0
of which: accredited hospitals[1]	4.263	100.0	4.289	100.6	4.335	101.7	4.351	102.1	4.321	101.4
Total public hospital expenditure	60.499	100.0	61.169	101.1	62.313	103.0	63.050	104.2	63.645	105.2
Other expenditure features	51.185	100.0	51.504	100.6	50.354	98.4	50.681	99.0	50.694	99.0
Total public healthcare spending	*111.684*	*100.0*	*112.673*	*100.9*	*112.667*	*100.9*	*113.731*	*101.8*	*114.339*	*102.4*

(1) Code 5.1 Institutes (Private accredited healthcare facility) in the ministerial classification.
Source: *data processed by Ermeneia from the 2015, 2016, 2017, 2018 and 2019 "Report on the coordination of public finance" by the Court of Auditors, the 2018 Agenas Report on the monitoring of the health spending of the Regions and the 2019 MEF Report on the monitoring of the healthcare spending*

Table 18 – Healthcare expenditure at constant prices (*). Years 2013-2017 (in billions of euro + I.N. 2015 = 100.0)

Types of spending	*2013*	*2014*	*2015*		*2016*		*2017*	
			A.V.	*I.N.*	*A.V.*	*I.N.*	*A.V.*	*I.N.*
Public hospital facilities	53.212	53.236	53.847	100.0	53.953	100.2	54.231	100.7
Accredited hospitals (as a whole)	8.408	8.504	8.466	100.0	8.389	99.1	8.267	97.6
of which: accredited hospitals[1]	4.342	4.329	4.335	100.0	4.302	99.2	4.243	97.9
Total public hospital expenditure	61.620	61.739	62.313	100.0	62.342	100.0	62.498	100.3
Other expenditure features	52.134	51.984	50.354	100.0	50.112	99.5	49.781	98.9
Total public healthcare spending	113.754	*113.723*	*112.667*	*100.0*	*112.453*	*99.8*	*112.279*	*99.7*

(*) GDP deflator calculated on the basis of the new ISTAT series in a chained series with reference to 2015 (thus the Index Numbers start from the year 2015 (2015 = 100.0).
(1) Code 5.1 Institutes (Private accredited healthcare facility) in the ministerial classification.
Source: *data processed by Ermeneia from the 2015, 2016, 2017, 2018 and 2019 "Report on the coordination of public finance" by the Court of Auditors, the 2018 Agenas Report on the monitoring of the health spending of the Regions and the 2019 MEF Report on the monitoring of the healthcare spending*

ings are exceeded, fee reductions, and sliding rates into the lowest bracket in order to save resources and so on), as described in section 3.2 below, which is dedicated to the topic of Fees.

3.2. A system of fees for accredited facilities experiencing deflation over time

It should be recalled that the DRGs (*Diagnosis Related Groups*) constitute a system that classifies patients into groups deemed significant from a clinical point of view and homogeneous in terms of quantity and type of care resources consumed. In the original system, however, the costs associated with the use of these resources do not take into account the medical component.

In April 1994, there began to be concrete discussions in Italy for the first time regarding the introduction of a new remuneration system for hospital services, through the publication of a provision of the then Ministry of Health (Ministerial Decree of April 15, 1994), which set out the rules for determining the rates for specialist, rehabilitation and hospital treatment services.

The Regions were given the difficult task of setting the rates using the definition of a "standard production cost" to which general costs also had to refer as the informational criterion. At the same time, it was determined that the model to serve for inspiration was that of the US DRGs (*Diagnosis Related Groups*) or homogeneous diagnosis groups of the HCFA (*Health Care Financing Administration*) 10.0, an instrument prepared by the US Health Authorities and updated annually, also containing a list of corresponding relative weights, which expressed the relationships between the economic valuations of the individual groupings.

With a subsequent decree of December of the same year (Ministerial Decree of December 14, 1994), the Ministry released the first service rates to be used temporarily by those Regions that had not yet established their own fee schedules, specifying, however, that these values were the highest possible.

Subsequently, with the Ministerial Decree of June 30, 1997, an update to the ministerial rates was published, this time determined by examining a sample of public and private facilities and associating the cost values per cost center with the statistical indicators taken from the US *Medicare* system. It was an early attempt to calculate the average cost per DRG independent from the system of relative weights, although still based on allocative statistics from outside Italy.

Even after that update, however, the situation remained extremely varied, with some Regions adopting the highest ministerial rates and reducing them by a percentage share, and other Regions that referred to the relative 1994 weights or 1997 updated weights to define the economic valuation of the weight = 1 (corresponding to a typical average value), thereby determining the consequent amounts for each DRG.

The rate revision of 1997 was followed by that of the Ministerial Decree of September 12, 2006, once again based on the DRG version 10.0.

Subsequently, however, some Regions went further and adopted more recent versions of the DRG than 10.0, up to the alignment imposed by the publication at the end of March 2009 by the Ministerial Decree of December 18, 2008. This decree, based on the new ICD-9-CM 2007 system, redesigned the entire classification system for diagnoses, interventions and diagnostic and therapeutic procedures (almost a thousand codes more than the previous version) and DRG *grouping*: consequently DRGs went from 492 in the HCFA 10.0 version used for the last rate update in 2007, to 538 in the new CMS 24.0 version, with 22 codes no longer being valid, 54 that were introduced from scratch and 12 that had been modified). Incidentally, CMS 24.0 is the latest version that can be borrowed from *Medicare*[8], which is now decidedly oriented towards clinical severity criteria rather than on the absorption of resources and has explicitly invited the countries that continue to make use of its updates to create a proprietary system. From all this it follows that future rate revisions, theoretically foreseen every two years, must necessarily refer to an IT-DRG or to a European DRG system, both of which are still in the planning phase.

After the aforementioned Ministerial Decree of December 18, 2008, which sanctioned the transition to the DRG 24.0 version, the first revision of the maximum national reference rates took place in October 2012, with the Balduzzi Ministerial Decree still in force.

The complete Regional fee schedule for the privately operated hospital sector, that is, of the accredited facilities of the National Health Service, is summarized in Table 19.

[8] *Medicare* is the name attributed to the Medical Insurance Program administered by the United States Government, for - and it should be remembered - people aged 65 and over or those with other special needs.

Table 19 – Summary of fee schedules applied to hospital facilities of the privately operated component (accredited facilities) of the National Health Service

Region	*Reference Standards*	*Rates adopted*	*% Change compared to the October 18, 2012 national fee schedule*					*Notes*
			Acute cases			*Rehabilitation*	*Long-term care*	
			Category A	*Category B*	*Category C*			
Piedmont	Regional Council Decree no. 14-6039 of July 2, 2013	National w/o changes	No changes			No changes	No changes	
Aosta Valley	Regional Council Decree no. 427 of March 15, 2013	National with changes	- 7% for private providers (classified in category B)			-3.0%	-3.0%	Refunds possible for prostheses
Lombardy	Regional Council Decree no. 2989 of December 23, 2014	Regional	+ 3.5% nominal average for private providers			+3.5%	+3.5%	Refunds possible for prostheses For actual variations relating to admissions for acute cases, please refer to the case studies of the individual facilities
Autonomous Province of Bolzano	Autonomous Province Resolutions no. 228 of 2012 and no. 3173 of 2009	Provincial	On average similar to the national fee schedule			+2%	+52.9%	For actual variations relating to admissions for acute cases, please refer to the case studies of the individual facilities
Autonomous Province of Trento	Autonomous Province Resolutions no. 936 of 2012 and no. 2961 of 2012	Provincial	+ 10% nominal average for private providers			No changes	No changes	Refunds possible for prostheses For actual variations relating to admissions for acute cases, please refer to the case studies of the individual facilities
Veneto	Regional Council Decree no. 1805 of November 8, 2011 and following	Regional	+ 7.6% nominal average for private providers (comprehensive case study outside the region)			+1%	+2.2%	Refunds possible for prostheses For actual variations relating to admissions for acute cases, please refer to the case studies of the individual facilities
Friuli Venezia Giulia	Regional Council Decree no. 1535/2009	Regional	+ 10% nominal average for private providers			+2.5%	-10.0%	Refunds available only for breast implants
Liguria	Regional Council Decree no. 1353/2014	National with changes	National fee schedule with reductions for financial hardships			No changes	No changes	Refunds available only for TAVI valves The national fee schedule is applied 100% up to about 92% of the budget and subsequently reduced by 50%

./.

(Continued) *Table 19– Summary of fee schedules applied to hospital facilities of the privately operated component (accredited facilities) of the National Health Service*

Region	*Reference Standards*	*Rates adopted*	*% Change compared to the October 18, 2012 national fee schedule*					*Notes*	
			Acute cases			*Rehabilitation*	*Long-term care*		
			Category A	*Category B*	*Category C*				
Emilia Romagna[1]	Regional Council Decree no. 1673/2014	National with changes	- 8% on average for private providers in category C (see footnote)			(see footnote)	(see footnote)	Refunds possible for prostheses and aids	The fees for Rehabilitation Codes 75 and 28, limited to MDC1, increased by 49.2%
Tuscany	Regional Council Decree no. 947 of September 27, 2016	National with changes	- 12% for private providers (all classified in category B)			No changes	No changes		For DRGs 544 and 545 the values are the same as for public facilities
Umbria	Regional Council Decree no. 1599 of December 30, 2013	National w/o changes	No changes			No changes	No changes	Refunds are available for some high-cost devices	
Marche	Regional Council Decree no. 709 of June 9, 2014	National with changes	- 5% for private providers (all classified in category C)			No changes	No changes		An exception is made for some DRGs which maintain the national rate or are valued at the TUC rate
Lazio[2]	Commissioner ad Acta Decree no. 310/2013 Commissioner ad Acta Decree no. 332/2015 Commissioner ad Acta Decree no. 151/2019	National with changes	(see footnote)			No changes	No changes		
Abruzzo	Commissioner ad Acta Decree no. 13 of Feb. 20, 2013	National w/o changes	No changes			No changes	No changes		
Molise	Commissioner ad Acta Decree no. 19 of June 27, 2013	National with changes	- 12% for private providers			-12.0%	No changes		
Campania[3]	Commissioner ad Acta Decree no. 32 of March 27, 2013	National with changes	- 10% average for private providers (see footnote)			-4.0%	-5.0%		The fee for Rehabilitation Code 75 remained unchanged at € 261.84 (Commissioner ad Acta Decree 66/2012)

./.

(Continued) *Table 19– Summary of fee schedules applied to hospital facilities of the privately operated component (accredited facilities) of the National Health Service*

Region	*Reference Standards*	*Rates adopted*	*% Change compared to the October 18, 2012 national fee schedule*					*Notes*
			Acute cases			*Rehabilitation*	*Long-term care*	
			Category A	*Category B*	*Category C*			
Apulia[4]	Regional Council Decree no. 951/2013 Regional Council Decree no. 881/2019	National with changes	-2.0%	-8.0% (see footnote)	-15.0%	No changes	No changes	
Basilicata	Regional Council Decree no. 463 of April 30, 2013	National w/o changes	No changes			No changes	No changes	
Calabria	Decree no. 19 of February 11, 2013	National w/o changes	No changes			No changes	No changes	
Sicily	Executive Decree no. 1060 of June 4, 2012	National with changes	Public and high complexity	-1.5%	-5.5%	No changes	No changes	
Sardinia	Regional Council Decree no. 9/3 of March 9, 2005 and following	Regional	- 10% for private providers			-0.5%	No changes	The long-term care fee was updated by DGA 38 on Aug. 8, 2017

(1) In Emilia Romagna, for all but 4 Category C facilities, the changes compared to the 2012 Ministerial Decree are on average of -8%, with changes from -5% to -30% depending on the DRG. The following 10 DRGs have a higher rate than the national fee schedule and have been considered in the calculation: DRG 87, 88, 119, 270, 360, 364, 503, 541, 542 and 544. The regional day rates for Rehabilitation Code 56 and for the long-term care Code 60 (DGR no. 1905 of 2014) are higher than the national fee schedule by + 20% and + 12%, respectively, when the acute event has not occurred at the same facility. The highest national rate (100%) applies to all public hospitals (A2) and to the 4 accredited highly specialized facilities. The regional rate (A1) for particular public hospitals (see IOR) and university hospitals increased by + 7% compared to the national rate for all DRGs.

(2) In Lazio, DCA (Commissioner ad Acta Decree) no. 332 of 2015 introduced a fee schedule that was subsequently remodeled by DCA 151 on April 30, 2019. The rate cuts envisaged for the year 2019 (starting from June 1st) vary from 4% to 8% for facilities with and ER, and from 6% to 8% for those without an ER. The cuts are also applied according to the complexity classes of the DRGs and whether or not patients came from the Emergency Room. These cuts will attain a maximum of 15% for the year 2021 for facilities without and ER and for low-complexity DRGs not coming from the ER.

(3) In Campania, for accredited facilities in the 2.3 and 4 rate categories, the changes compared to the 2012 Ministerial Decree are an average of -10%, with changes from -5% to -22% depending on the category. For accredited highly-specialized facilities (rate categories 6 and 7) the following applies: 100% of the national fee schedule for highly-specialized services with cardiac surgery DRGs and nephrological-urological-oncological DRGs; 90% of the national rate for the remaining DRGs. The accredited facilities included in rate category 2 are part of the Integrated Regional Healthcare Emergency System (S.I.R.E.S.).

(4) In Apulia, in addition to reductions by category, the Regions has adopted Regional Executive Committee Resolution 881/2019 regulating the contractual standards with accredited hospital facilities, and has expressly confirmed the rate regression system already introduced with the Regional Executive Committee Resolution 1494/2009. It makes a 15% regression applicable for between 80% and 100% of the established production volume. This essentially offers a discount of about 3.5% on the total production, a value that adds up to the percentage reduction envisaged by the aforementioned Regional Executive Committee Resolution 951/2013 for the individual rate categories. Starting in 2017, this regressive system has also been extended to services rendered to so-called actively mobile extra-regional patients.

Source: *data processed by Ermeneia – Studi & Strategie di Sistema, 2019*

As can be seen, the fee schedule for acute care services is divided into three types, namely:

a) there are some Regions such as Piedmont, Umbria, Abruzzo, Basilicata and Calabria that have fully implemented the Balduzzi Ministerial Decree, without any changes;
b) on the other hand, there are Regions and/or Autonomous Provinces that have determined their own rates apart from the national fee schedule and with a sometimes extremely pronounced difference between them, for DRG 538 of the *Medicare* version still in force: this differentiated situation required an in-depth analysis of the individual DRGs based on the frequency of accredited hospital cases. However, the regional average values shown in Table 19 may, in turn, present internal variations according to the case history (by number and type of services) of each hospital facility, which may be adjusted upwards or downwards (and, in the latter case, significantly). These rates, which may be defined as "proprietary", have been adopted by 6 Regions and/or Autonomous Provinces: Lombardy, Autonomous Province of Bolzano, Autonomous Province of Trento, Veneto, Friuli Venezia Giulia, and Sardinia;
c) finally, other Regions have chosen to start from the National Fee Schedule, set out in the Balduzzi Ministerial Decree, and make some reductions to the rates: these include Valle d'Aosta, Liguria, Emilia Romagna, Tuscany, Marche, Lazio, Molise, Campania, Apulia and Sicily.

On the other hand, with regard to rehabilitation and long-term care services, the following must be noted:

- prevalent application of the National Fee Schedule without any changes for the Autonomous Province of Trento, and for the Regions of Liguria, Tuscany, Umbria, Marche, Lazio, Abruzzo, Apulia, Basilicata, Calabria and Sicily;

  as for any changes, decreases were seen in Valle d'Aosta, Molise, Campania and Sardinia, while increases were seen in Lombardy, the Autonomous Province of Bolzano, Veneto and Emilia Romagna. While Friuli Venezia Giulia increased the fees for rehabilitation and decreased those for long-term care.

The overall result may be defined as an early DRG fee reduction/control maneuver. In fact:

- the great regional variability on rates tends to see more decreases in fees than increases;
- and it should also be borne in mind that the Balduzzi Ministerial Decree of October 2012 was drafted more with a logic based on the objective of

reducing the overall costs of the services provided by the accredited facilities (through re-pricing mechanisms increasing fees for less widespread services, such as high-complexity services, and decreasing fees for the most common services): all without having a real preliminary assessment of the actual production costs of the services.

In addition to what has just been mentioned in terms of regional rate and their trend, it should also be emphasized that, next to any "explicit" reductions shown in Table 19, there are other forms of "implicit" reduction in national rates which constitute a further method of containment of the latter. Suffice it to mention that (see Table 20):

a) payment to the accredited facilities for DRG services includes – implicitly – multiple costs that the public facilities do not have because they are funded in one way or another (or in any case borne by debt) such as for example:
   - the depreciation of real estate following its purchase (3% per year);
   - the depreciation of hardware and software equipment (20% per year of the cost of the "normal" ones and 33% of those assessable as highly technological);
   - regular maintenance costs (which are charged to the yearly Income Statement) and extraordinary maintenance costs which are assimilated to Equity and are therefore amortized at 3% per year).

   It may be estimated that on the whole the items mentioned here might have an impact on Revenues of 10% -13%;
b) there is also the reduction resulting from the impact of inflation which, in the period 2011-2018, was estimated to be 7.0% (based on the Istat NIC index – Consumer price index for the whole nation);
c) finally, we must also take into account the introduction of a 2% reduction in the overall appropriations for the facilities accredited by the Monti Government, to the extent of 0.5% in 2012, 1% in 2013 and 2% from 2014 onwards.

Thus, the overall estimate of the "implicit" reduction in DRG rates, regardless of any adjustments to the regional rates, can be reported at a value between 19% and 22%, as shown in Table 20. This is true even if the cost items are not complete, since there are mandatory legal procedures which entail certain additional charges for accredited facilities (such as building compliance, the application of 626, etc.), obligations that are neither applied nor applicable to the same degree for public facilities.

Table 21 below shows – as usual – the consolidated average performance of the instruments adopted by the Regional Health Services in order to "contain" the services provided by accredited hospital facilities, which results in representing a third type of DRG rate containment/stabilization maneuver.

Table 20 – Evaluation chart for the "implicit" reduction of DRG rates

Types of "implicit" reductions	*Estimated percentage of implicit reduction of DRG rates*
First type of "implicit" reduction to DRG rates (arising from internal factors)	
– Management costs relating to the Capital expenditures of accredited hospital facilities, which are "included" in the DRG rates, which are instead funded for public structures (or not funded or, financed compatibly with the availability of resources): ▪ Depreciation of real estate (3% per year) ▪ Depreciation of hardware and software equipment (20% per year) ▪ Depreciation of high-tech hardware and software equipment (3% per year) ▪ Regular maintenance costs (charged entirely to the yearly Income Statement) ▪ Extraordinary maintenance costs (treated as Equity and therefore amortized at 3% per year)	10%-13%
Second type of "implicit" reduction to DRG rates (arising from external factors)	
– Inflation trend over the period 2011-2018 (based on the Istat NIC index – *Consumer price index for the whole nation*)	7.0%
– Introduction, based on Legislative Decree no. 95/2012, of a 2% reduction, starting in the year 2014, of the total services invoiced by the Regional Health Services to accredited hospitals[1]	2.0%
Estimated total of "implicit" reductions of national rates	19.0%-22.0%

(1) In reality, the aforementioned Legislative Decree envisaged a reduction, compared to the final expenditure for the year 2011, of 0.5% for the year 2012, of 1% for the year 2013, and of 2% starting from the year 2014.

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table 21 – The change in the method of financial charges and settlement of debts of the accredited hospitals [a]

Mechanisms	*% of total cases examined*												
	2019	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*
– The system of "ceilings" has been applied to services in the past twelve months	95% [b]	95%	90%	89%	83%	95%	100%	95%	94%	94%	84%	100%	100%
– A rate regression was applied in the event of overshooting the "ceilings"	37%	38%	32%	24%	32%	35%	50%	41%	50%	50%	56%	72%	70%
– Average regression applied compared to the full price	41%	25%	42%	27%	44%	39%	43%	51%	35%	40%	45%	44%	52%
– Payments for bills are delayed	35%	39%	39%	39%	50%	52%	61%	68%	72%	75%	79%	77%	90%
– Average delay in months	5.1 months	4.0 Months	4.6 months	4.4 months	4.7 months	10.9 months	12.5 months	6.0 months	6.9 months	11.8 months	11.6 months	8.0 months	7.3 months
– A monthly payment is made on the invoices of private hospitals (accredited healthcare facilities)	58% [c]	71%	78%	72%	70%	86%	75%	63%	78%	83%	83%	72%	70%
– Average size of the payment compared to the invoice	85%	86%	87%	88%	84%	69%	79%	84%	79%	80%	75%	70%	77%
– A *factoring* system was applied to ensure payments and due dates	16% [d]	18%	21%	33%	30%	35%	40%	37%	17%	18%	11%	12%	26%

(a) 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.
(b) In 2019 it was actually 100.0% for hospitalization services and 90% for outpatient services.
(c) 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, 11.8% in 2018 and, finally, 11% in 2019.
(D) But 16% also say that there is no longer a *factoring* system, which had, however, previously been introduced.
Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

How to check:

- the "ceilings" system is used for services in almost all the Regions: this occurred in 95% of cases in 2019 (which actually includes 100.0% for hospitalization services and 90.0% for outpatient services);
- a rate regression is applied in approximately 41% of cases in 2019 in the event of exceeding the "ceilings" (tending to stabilize around the percentage referred to, at around 40%);
- a certain delay has to be accounted for relating to the settlement of invoices for the services performed, which is 35% in 2019, however with a tendency to improve compared to previous years and in particular to the more distant past (so much so that the average delay in months is now 5.1 compared to 7-8 months in 2007-2008); additionally, a monthly advance on turnover is disbursed in 58% of cases, with the average size of this advance exceeding 80% (showing an improvement trend also in this case over the years indicated in Table 20);
- finally, a *factoring* system was used in order to ensure payments on due dates which today affects slightly less than 20% of the Italian regions.

3.3. The monitoring of the Income Statements of public Hospital Centers and areas of potential inefficiency

This report has been analyzing the data of the Income Statements of public Hospital Centers for a few years now, with the dual purpose of making the reporting of the relative activities carried out by the latter more transparent and comprehensible (as required by current legislation), as well as in order to highlight the areas of inefficiency that can hide potential balance sheet adjustments.

The intertwining of needs for greater transparency and needs for greater efficiency, on the one hand, and the parallel difficulty of implementing what is needed to promote both, on the other, suggests mentioning three contextual situations that have remained such for three years now, as was also mentioned in the previous Report.

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 Essential levels of care (LEAs,

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). 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[9] on the 2016 Financial Statements of the Hospital Centers, up to a maximum of 30% of the revenues received from health services, co-payment charges and services outside of essential levels of care (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

[9] 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:

- 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.

in fact even greater, being determined by means of a special formula[10] that made it possible to include higher Revenue sizes. It is self-evident that the 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 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 "by-function" 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.

It is here then that the reasons that were (and are) the basis for the analysis of the Income Statement data of the public Hospital Centers and their monitoring over time are referenced in the following purposes, which constitute a constant part of the analysis of this specific section 3.3., namely:

– 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

[10] In the event of a maximum increase equal to 30% of "by function" activities, the formula is as follows:

$$\frac{\text{Revenues for health and social health services + Collections of co-payment charges + Extra essential levels of care (LEAs) contributions}}{70\%} \times 30\%$$

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.

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.

For the 2018 fiscal year, the Income Statements of 33 public Hospital Centers (compared to 34 the previous year, due to a merger) were taken into consideration, and are distributed as follows:

- 6 in the Region of Piedmont
- 2 in the Region of Veneto
- 4 in Region of Emilia-Romagna

12 in the North

- 2 in the Region of Marche
- 5 in the Region of Lazio

7 in Central Italy

- 2 in the Region of Apulia
- 4 in the Region of Calabria
- and finally, 8 in the Region of Sicily

14 in the South

The values of the individual items on the Income Statements of the public Hospital Centers just mentioned are reported in the Table Appendix 1 in Section 1 of the Appendices and on the basis of this data, the following procedure was carried out in order to more easily obtain interpretable indicators:

- Index Numbers were calculated starting from the number of Hospital Admissions and Revenues from health and social and healthcare services, taking the year 2014 as the basis of these Index Numbers (see Table 22);
- similar Index Numbers were also calculated, this time relating to the Costs for the Purchase of Goods and Services (see Table 23);
- the Index Numbers of the values of the "by-function" activities were calculated, as well as the percentage incidence of the latter on the Revenues from healthcare services + co-payment charges (see Table 24);
- finally, the absolute values (in thousands of euros) of the operating results of the 33 Hospital Centers taken into consideration (see Table 25) were reported.

If we look at the first of the tables mentioned, the one relating to the comparison between the trend of Hospital Admissions and the trend of Revenues from healthcare services corresponding to the years 2014-2018 (see Table 22) the following phenomena emerge:

a) a substantial stabilization of Inpatient admissions and *day hospital* admissions, given that their value of 100.0 in 2014 (as an Index Number) rose to 100.8 in 2018, with some intermediate decline in the years 2015 and 2016, if you look at the overall average of the 33 Hospital Centers analyzed. Contrasting this stabilization, there was an increase in Revenues from health and social and healthcare services, going from – in terms of Index Numbers – 100.0 in 2014 to 112.2 in 2018: the difference between the Index Numbers for Revenues and the Index Numbers for Hospital Admissions in the year 2018 is on average, for all Hospital Centers, equal to + 11.4 points, confirming the trend in place since 2015. However, it should be noted that if Hospital Admissions decreased and Revenues from health and non-health services increased at the same time, there is initially a possible "anomaly": consequently, it is legitimate to ask whether the increase in Revenues is actually linked to an increase in the complexity of the services provided or not;
b) but this last affirmation becomes a little clearer if we consider the Hospital Centers grouped by geographical area. In fact, compared to a 2018 Index Number for Revenues equal to 112.2 at the national level:
   - Hospital Centers in the North do not differ much (112.5);
   - even the Hospital Centers In Central Italy are readjusting downwards (109.7);
   - and the Hospital Centers in the South have a slightly higher Index Number (113.3).

Table 22 – Comparison of trends for Admissions and corresponding Revenues in the four years considered (I.N. 2014 = 100.0)

Hospital Centers (1)	Number of impatient admissions and day-hospital admissions					Revenues from healthcare services and health-related social health services as per the IS (Cod. A0320)					Index Number difference between Revenues and Admissions in 2018
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	
H.C. 1	100.0	93.2	91.8	91.3	93.1	100.0	103.4	104.2	102.5	111.1	18.0
H.C. 2	100.0	115.6	101.1	116.3	119.4	100.0	104.1	105.5	107.1	118.1	-1.3
H.C. 3	100.0	100.0	99.5	98.9	102.0	100.0	103.5	106.2	107.3	113.7	11.7
H.C. 4	100.0	102.0	101.8	101.3	117.4	100.0	103.9	108.9	110.9	117.4	0.0
H.C. 5	100.0	103.2	94.6	103.1	100.9	100.0	100.1	104.2	108.3	105.2	4.3
H.C. 6	100.0	113.0	112.7	112.1	112.8	100.0	102.4	102.1	101.6	104.0	-8.8
Piedmont Total	***100.0***	***107.4***	***104.2***	***106.8***	***109.8***	***100.0***	***102.9***	***104.3***	***105.0***	***109.7***	***-0.1***
H.C. 7	100.0	109.1	106.9	112.2	112.0	100.0	101.4	101.9	107.3	108.4	-3.5
H.C. 8	100.0	114.0	124.2	123.8	124.8	100.0	106.7	110.3	114.1	117.9	-6.9
Veneto total	***100.0***	***111.5***	***115.5***	***118.0***	***118.4***	***100.0***	***104.0***	***106.0***	***110.7***	***113.1***	***-5.3***
H.C. 9	100.0	100.1	99.5	93.1	94.1	100.0	101.4	102.0	102.2	103.6	9.5
H.C. 10	100.0	98.8	97.3	127.4	142.5	100.0	100.1	99.7	157.7	158.3	15.8
H.C. 11	100.0	99.3	100.5	100.0	100.6	100.0	100.6	103.1	105.8	107.4	6.8
H.C. 12	100.0	99.1	97.5	97.0	101.2	100.0	100.4	99.9	102.6	105.7	4.5
Emilia Romagna Total	***100.0***	***99.4***	***99.1***	***102.6***	***106.6***	***100.0***	***100.7***	***101.6***	***113.6***	***115.3***	***8.7***
NORTH ITALY TOTAL	**100.0**	**105.3**	**104.7**	**107.6**	**110.4**	**100.0**	**102.4**	**103.8**	**109.5**	**112.5**	**2.1**
H.C. 13	100.0	96.8	96.8	103.0	102.2	100.0	97.6	100.5	111.2	120.7	18.5
H.C. 14	100.0	96.1	96.2	100.0	100.2	100.0	98.9	104.3	108.2	114.5	14.3
Marche Total	***100.0***	***96.4***	***96.5***	***101.2***	***101.0***	***100.0***	***98.5***	***102.9***	***109.2***	***116.7***	***15.7***
H.C. 15	100.0	80.8	72.2	80.5	80.0	100.0	97.6	93.9	94.1	87.8	7.8
H.C. 16	100.0	94.2	85.2	84.7	93.5	100.0	113.8	110.8	110.8	109.7	16.1
H.C. 17	100.0	85.4	79.7	96.6	88.3	100.0	103.2	103.7	106.4	110.1	21.8
H.C. 18	100.0	85.7	79.6	79.2	83.2	100.0	103.5	106.1	112.0	118.2	35.0
H.C. 19	100.0	88.1	83.9	67.6	67.6	100.0	106.5	109.1	112.8	116.2	48.6
Lazio Total	***100.0***	***85.9***	***79.3***	***83.6***	***82.4***	***100.0***	***103.7***	***103.4***	***105.8***	***106.8***	***24.4***
CENTRAL ITALY TOTAL	**100.0**	**88.9**	**84.2**	**88.7**	**87.8**	**100.0**	**102.2**	**103.3**	**106.8**	**109.7**	**21.9**

./.

(Continued) *Table 22 – Comparison of trends for Admissions and corresponding Revenues in the four years considered (I.N. 2014 = 100.0)*

Hospital Centers (1)	Number of impatient admissions and day-hospital admissions					Revenues from healthcare services and health-related social health services as per the IS (Cod. A0320)					Index Number difference between Revenues and Admissions in 2018
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	
H.C. 20	100.0	94.0	93.5	93.0	81.8	100.0	103.9	97.6	92.7	87.6	5.7
H.C. 21	100.0	95.6	94.8	94.3	93.6	100.0	105.7	99.0	104.4	100.4	6.8
Apulia total	***100.0***	***94.5***	***93.9***	***93.5***	***85.9***	***100.0***	***104.6***	***98.1***	***96.8***	***92.1***	***6.1***
H.C. 22	100.0	98.3	106.4	106.2	105.5	100.0	99.4	120.7	121.7	129.1	23.6
H.C. 23	100.0	99.1	93.4	93.0	91.8	100.0	100.2	106.6	116.2	117.4	25.7
H.C. 24	100.0	100.4	100.3	99.8	100.8	100.0	119.2	130.3	161.3	161.7	60.9
H.C. 25	100.0	97.9	92.2	91.8	92.9	100.0	99.0	110.7	119.6	136.5	43.5
Calabria Total	***100.0***	***98.7***	***97.7***	***97.4***	***97.3***	***100.0***	***101.7***	***114.7***	***123.9***	***131.5***	***34.2***
H.C. 26	100.0	94.7	102.2	98.7	95.4	100.0	106.8	106.9	115.8	115.0	19.6
H.C. 27	100.0	95.8	112.1	111.5	102.0	100.0	108.1	117.1	116.9	117.8	15.8
H.C. 28	100.0	97.4	108.0	107.4	103.5	100.0	109.9	112.9	110.9	115.6	12.1
H.C. 29	100.0	92.0	102.3	101.9	95.5	100.0	103.8	106.9	103.7	99.2	3.8
H.C. 30	100.0	99.4	114.1	113.6	140.3	100.0	112.2	119.3	117.9	123.8	-16.5
H.C. 31	100.0	95.1	92.4	92.3	90.9	100.0	107.3	112.5	112.6	118.6	27.7
H.C. 32	100.0	88.8	102.2	101.7	93.5	100.0	100.3	106.8	104.2	110.8	17.2
H.C. 33	100.0	103.2	131.3	130.8	119.7	100.0	116.4	137.3	127.9	132.3	12.6
Sicily Total	***100.0***	***95.8***	***107.7***	***107.0***	***104.5***	***100.0***	***108.1***	***114.8***	***113.5***	***117.0***	***12.5***
SOUTH ITALY TOTAL	**100.0**	**96.1**	**101.9**	**101.3**	**98.0**	**100.0**	**106.2**	**110.7**	**111.2**	**113.3**	**15.3**
OVERALL TOTAL	**100.0**	**98.3**	**99.0**	**101.0**	**100.8**	**100.0**	**103.5**	**105.7**	**109.4**	**112.2**	**11.4**

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

It is evident that the difference between the upward trend of Revenues, especially for the Hospital Centers in the South, and the downward trend of Hospital Admissions in the latter case (98.0 in terms of Index Number) can somehow better explain the "anomaly" referred to in point a) above: unless we are to assume a significant increase in the complexity of the services compared to the past. And this gap is particularly pronounced for the Hospital Centers in Calabria and Sicily.

Turning to the comparison between the trend in the number of Admissions in the five-year period 2014-2018 and the trend in the same period of the costs for the purchase of Goods and Services, one cannot fail to note the presence of a further possible "anomaly" (see Table 23), given that:

a) there is a repeated presence (similar to what was observed in Table 1 above) of a gap between the Index Numbers indicating the increase in Costs in the five-year period for the Purchase of Goods and Services at the national level (122.7) with respect to the stabilization of the number of Inpatient admissions and *day hospital* admissions (with an Index Number equal to 100.8): and, even while the trend of Hospital admissions shows some downward fluctuations in the years 2015 and 2016, the Cost for the Purchase of Goods and Services grew constantly and at an accelerated rate, especially in the last two years: with a difference, in 2018, of 21.9 points in the Index Number for the Purchase of Goods and Services compared to that of the number of Hospital Admissions;
b) however, it is appropriate to take account of the differences between the Index Numbers for the Costs for the Purchase of Goods and Services and those relating to the number of Hospital Admissions, taking into account the location of the Hospital Centers examined. The comparison of the average indices of all Hospital Centers in 2018 was between 122.7 for the costs related to the Purchase of Goods and Services and 100.8 for the number of Hospital Admissions, but:
   - the Hospital Centers in the North present Index Numbers corresponding to 129.9 compared to 110.4;
   - the Hospital Centers in Central Italy show a comparison that sees a value of 113.3 in the first case compared to 87.8 in the second case;
   - and finally, the Hospital Centers in the South show comparative figures of 119.9 and 98.0 (but with peaks that can reach 169.9 for a Center in Calabria or for a Center in Sicily).

Table 23 – Comparison of trends for the number of Admissions and costs for the Purchase of Goods and Services in the four years considered (I.N. 2014 = 100.0)

Hospital Centers	Number of impatient admissions and day-hospital admissions					Cost for the Purchase of Goods and Services (Cod. BA010)					Index Number difference between Costs for the Purchase of Goods and Services, and Admissions in 2018
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	
H.C. 1	100.0	93.2	91.8	91.3	93.1	100.0	111.9	120.2	124.5	133.3	40.2
H.C. 2	100.0	115.6	101.1	116.3	119.4	100.0	114.4	117.5	121.3	132.3	12.9
H.C. 3	100.0	100.0	99.5	98.9	102.0	100.0	105.9	111.5	113.3	125.1	23.1
H.C. 4	100.0	102.0	101.8	101.3	117.4	100.0	106.0	118.8	122.6	132.1	14.7
H.C. 5	100.0	103.2	94.6	103.1	100.9	100.0	107.0	111.3	118.4	119.2	18.3
H.C. 6	100.0	113.0	112.7	112.1	112.8	100.0	109.9	109.5	113.0	119.5	6.7
Piedmont Total	***100.0***	***107.4***	***104.2***	***106.8***	***109.8***	***100.0***	***109.5***	***113.1***	***116.8***	***124.7***	***14.9***
H.C. 7	100.0	109.1	106.9	112.2	112.0	100.0	113.2	111.2	116.6	119.0	7.0
H.C. 8	100.0	114.0	124.2	123.8	124.8	100.0	120.2	118.8	128.3	130.7	5.9
Veneto total	***100.0***	***111.5***	***115.5***	***118.0***	***118.4***	***100.0***	***116.3***	***114.6***	***121.8***	***124.2***	***5.8***
H.C. 9	100.0	100.1	99.5	93.1	94.1	100.0	96.2	103.2	109.7	122.7	28.6
H.C. 10	100.0	98.8	97.3	127.4	142.5	100.0	107.0	110.2	186.0	184.9	42.4
H.C. 11	100.0	99.3	100.5	100.0	100.6	100.0	129.2	121.7	131.6	145.6	45.0
H.C. 12	100.0	99.1	97.5	97.0	101.2	100.0	115.2	110.4	115.5	127.1	25.9
Emilia Romagna Total	***100.0***	***99.4***	***99.1***	***102.6***	***106.6***	***100.0***	***114.4***	***112.9***	***131.7***	***142.5***	***35.9***
NORTH ITALY TOTAL	**100.0**	**105.3**	**104.7**	**107.6**	**110.4**	**100.0**	**112.9**	**113.4**	**122.7**	**129.9**	**19.5**
H.C. 13	100.0	96.8	96.8	103.0	102.2	100.0	104.6	106.9	119.5	124.7	22.5
H.C. 14	100.0	96.1	96.2	100.0	100.2	100.0	112.7	110.7	116.1	125.8	25.6
Marche Total	***100.0***	***96.4***	***96.5***	***101.2***	***101.0***	***100.0***	***110.0***	***109.5***	***117.2***	***125.4***	***24.4***
H.C. 15	100.0	80.8	72.2	80.5	80.0	100.0	98.0	94.3	86.4	94.7	14.7
H.C. 16	100.0	94.2	85.2	84.7	93.5	100.0	112.8	118.4	124.4	142.6	49.1
H.C. 17	100.0	85.4	79.7	96.6	88.3	100.0	106.5	104.2	111.5	107.5	19.2
H.C. 18	100.0	85.7	79.6	79.2	83.2	100.0	97.2	100.2	117.4	134.9	51.7
H.C. 19	100.0	88.1	83.9	67.6	67.6	100.0	98.5	91.9	92.8	95.7	28.1
Lazio Total	***100.0***	***85.9***	***79.3***	***83.6***	***82.4***	***100.0***	***102.4***	***100.2***	***104.4***	***109.0***	***26.6***
CENTRAL ITALY TOTAL	**100.0**	**88.9**	**84.2**	**88.7**	**87.8**	**100.0**	**104.4**	**102.6**	**107.7**	**113.3**	**25.5**

./.

(Continued) *Table 23 – Comparison of trends for the number of Admissions and costs for the Purchase of Goods and Services in the four years considered (I.N. 2014 = 100.0)*

Hospital Centers	Number of impatient admissions and day-hospital admissions					Cost for the Purchase of Goods and Services (Cod. BA010)					Index Number difference between costs for the Purchase of Goods and Services, and Admissions in 2018
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	
H.C. 20	100.0	94.0	93.5	93.0	81.8	100.0	115.6	100.0	86.6	91.4	9.6
H.C. 21	100.0	95.6	94.8	94.3	93.6	100.0	105.4	94.6	102.8	89.5	-4.1
Apulia total	***100.0***	***94.5***	***93.9***	***93.5***	***85.9***	***100.0***	***112.1***	***98.2***	***92.1***	***90.8***	***4.9***
H.C. 22	100.0	98.3	106.4	106.2	105.5	100.0	107.5	112.3	118.5	128.6	23.1
H.C. 23	100.0	99.1	93.4	93.0	91.8	100.0	115.6	111.3	116.9	126.9	35.1
H.C. 24	100.0	100.4	100.3	99.8	100.8	100.0	101.1	103.9	145.8	169.9	69.1
H.C. 25	100.0	97.9	92.2	91.8	92.9	100.0	99.3	104.5	119.2	136.8	43.9
Calabria Total	***100.0***	***98.7***	***97.7***	***97.4***	***97.3***	***100.0***	***106.0***	***108.3***	***122.9***	***137.6***	***40.3***
H.C. 26	100.0	94.7	102.2	98.7	95.4	100.0	105.9	111.5	120.3	126.3	30.9
H.C. 27	100.0	95.8	112.1	111.5	102.0	100.0	121.0	122.7	126.9	135.9	33.9
H.C. 28	100.0	97.4	108.0	107.4	103.5	100.0	119.5	119.9	118.6	129.6	26.1
H.C. 29	100.0	92.0	102.3	101.9	95.5	100.0	107.9	109.8	116.9	118.3	22.8
H.C. 30	100.0	99.4	114.1	113.6	140.3	100.0	134.0	131.6	143.8	169.0	28.7
H.C. 31	100.0	95.1	92.4	92.3	90.9	100.0	110.4	106.8	116.5	119.4	28.5
H.C. 32	100.0	88.8	102.2	101.7	93.5	100.0	98.6	106.1	102.3	112.2	18.7
H.C. 33	100.0	103.2	131.3	130.8	119.7	100.0	133.4	140.0	126.6	129.4	9.7
Sicily Total	***100.0***	***95.8***	***107.7***	***107.0***	***104.5***	***100.0***	***116.2***	***118.3***	***120.0***	***128.6***	***24.1***
SOUTH ITALY TOTAL	**100.0**	**96.1**	**101.9**	**101.3**	**98.0**	**100.0**	**113.6**	**111.5**	**113.0**	**119.9**	**21.9**
OVERALL TOTAL	**100.0**	**98.3**	**99.0**	**101.0**	**100.8**	**100.0**	**111.1**	**110.2**	**116.0**	**122.7**	**21.9**

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

Therefore, even comparing the trend of the Purchases of Goods and Services with the trend of the number of Hospital Admissions, some "anomalies" cannot be detected: unless it is hypothesized (but it is not an easily acceptable hypothesis) that the levels of hospital services during the five-year period are of such a high level as to imply a strong and generalized increase in the Costs for the Purchase of Goods and Services (and again here the case of the Hospital Centers in Calabria and Sicily displays Index Numbers that are particularly distanced from the others, even if some extreme cases also exist in the Center-North).

Subsequently the third type of comparison was carried out, as is illustrated by the data contained in Table 24 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, in addition to the Index Numbers for the five-year period, the percentage out of the Total Revenues from Healthcare services + Revenues from Co-payment charges shown on the Income Statements has also been calculated. This operation was supplemented by a further calculation, one that revalued the "by-function" activities through the application of the mechanism envisaged by the Ministerial Decree mentioned in note 9 above: which means that in the first case it would achieve a "real" percentage, while in the second case it would achieve a "virtual" (and substantially more generous) percentage. The result of this comparison shows:

a) first of all, a decrease in the value recognized on the Income Statements for the "by-function" activities which remain almost stable, going, in terms of Index Numbers, from 100.0 in 2014 to 100.8 in 2018, at the national level. But if we consider the Hospital Centers grouped by geographical area, we can see that:
   - for those operating in the North it goes from 100.0 to 110.4 (with some peaks especially in Piedmont and Veneto);
   - for those operating in Central Italy it drops from 100.0 to 87.8;
   - and for those operating in the South it drops from 100.0 to 98.0 (but in the latter case it should always be noted that there are particularly pronounced countertrends in Sicily where two Hospital Centers are at 119.7 and 140.3, respectively);
b) if we take into consideration the second group of data in Table 24, explaining the trend of the percentage incidence in the five-year period of the value of the "by-function" activities on the Total Revenues from Healthcare Services + Revenues from Co-payment charges, as can be seen in 2018, the Hospital Centers examined show an average national incidence of 35.6%: this percentage, however, had reached higher values

Table 24 – Trend of Revenues for "by function activities" (I.N. 2014 = 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*

Hospital Centers (1)	Revenues for "by function" activities as per the IS (Code AA0030)					Percentage of "by function" activities out of Revenues for services + Revenues from co-payment charge					Percentage of "by function" activities, calculated using the Ministerial Decree mechanism				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	100.0	93.2	91.8	91.3	93.1	29.6	31.3	36.8	38.3	38.3	22.9	23.8	26.9	27.7	27.7
H.C. 2	100.0	115.6	101.1	116.3	119.4	34.8	37.5	45.1	33.4	43.6	25.8	27.3	31.1	25.0	30.4
H.C. 3	100.0	100.0	99.5	98.9	102.0	27.9	27.5	29.3	29.7	27.2	21.8	21.5	22.6	22.9	21.4
H.C. 4	100.0	102.0	101.8	101.3	117.4	39.4	41.3	43.7	44.7	42.3	28.3	29.3	30.4	30.9	29.7
H.C. 5	100.0	103.2	94.6	103.1	100.9	34.4	34.3	40.4	34.7	39.2	25.6	25.6	28.8	25.7	28.1
H.C. 6	100.0	113.0	112.7	112.1	112.8	65.7	65.2	66.9	71.8	52.4	39.6	39.5	40.1	41.8	34.4
Piedmont Total	***100.0***	***107.4***	***104.2***	***106.8***	***109.8***	***46.9***	***47.4***	***50.6***	***50.5***	***43.8***	***31.9***	***32.2***	***33.6***	***33.5***	***30.5***
H.C. 7	100.0	109.1	106.9	112.2	112.0	33.0	32.0	38.7	26.5	24.4	24.8	24.2	27.9	21.0	19.6
H.C. 8	100.0	114.0	124.2	123.8	124.8	26.3	29.9	26.9	23.0	27.2	20.8	23.0	21.2	18.7	21.4
Veneto total	***100.0***	***111.5***	***115.5***	***118.0***	***118.4***	***29.7***	***30.9***	***32.6***	***24.7***	***25.9***	***22.9***	***23.6***	***24.6***	***19.8***	***20.5***
H.C. 9	100.0	100.1	99.5	93.1	94.1	20.4	18.7	18.9	20.2	22.5	17.0	15.8	15.9	16.8	18.4
H.C. 10	100.0	98.8	97.3	127.4	142.5	20.7	21.5	22.0	19.3	17.7	17.1	17.7	18.0	16.2	15.1
H.C. 11	100.0	99.3	100.5	100.0	100.6	20.4	20.8	21.6	22.3	21.4	16.9	17.2	17.7	18.2	17.6
H.C. 12	100.0	99.1	97.5	97.0	101.2	37.0	40.6	35.0	33.0	32.5	27.0	28.9	25.9	24.8	24.5
Emilia Romagna Total	***100.0***	***99.4***	***99.1***	***102.6***	***106.6***	***23.4***	***23.9***	***23.3***	***18.0***	***22.6***	***19.0***	***19.3***	***18.9***	***15.3***	***18.4***
NORTH ITALY TOTAL	**100.0**	**105.3**	**104.7**	**107.6**	**110.4**	**34.3**	**35.0**	**36.5**	**31.9**	**31.5**	**25.5**	**25.9**	**26.7**	**24.2**	**24.0**
H.C. 13	100.0	96.8	96.8	103.0	102.2	44.9	43.4	48.6	43.3	25.4	31.0	30.3	32.7	30.2	20.3
H.C. 14	100.0	96.1	96.2	100.0	100.2	34.4	39.0	34.3	31.0	24.6	25.6	28.0	25.5	23.7	19.7
Marche Total	***100.0***	***96.4***	***96.5***	***101.2***	***101.0***	***38.2***	***40.5***	***39.3***	***35.5***	***24.9***	***27.6***	***28.8***	***28.2***	***26.2***	***19.9***
H.C. 15	100.0	80.8	72.2	80.5	80.0	28.6	22.5	20.2	21.4	24.4	22.2	18.4	16.8	17.7	19.6
H.C. 16	100.0	94.2	85.2	84.7	93.5	25.6	15.5	13.3	12.4	13.2	20.4	13.4	11.7	11.0	11.7
H.C. 17	100.0	85.4	79.7	96.6	88.3	33.8	26.2	25.1	24.3	24.8	25.3	20.8	20.0	19.6	19.9
H.C. 18	100.0	85.7	79.6	79.2	83.2	17.5	14.2	12.9	12.2	16.0	14.9	12.4	11.4	10.9	13.8
H.C. 19	100.0	88.1	83.9	67.6	67.6	19.3	17.6	17.2	19.1	19.1	16.1	14.9	14.6	16.0	16.0
Lazio Total	***100.0***	***85.9***	***79.3***	***83.6***	***82.4***	***26.6***	***20.7***	***19.2***	***19.4***	***20.8***	***21.0***	***17.1***	***16.1***	***16.3***	***17.2***
CENTRAL ITALY TOTAL	**100.0**	**88.9**	**84.2**	**88.7**	**87.8**	**30.0**	**26.3**	**25.1**	**24.3**	**22.1**	**23.1**	**20.8**	**20.1**	**19.5**	**18.1**

./.

(Continued) *Table 24 – Trend of Revenues for "by function activities" (I.N.* 2014 = 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*

Hospital Centers (1)	Revenues for "by function" activities as per the IS (Code AA0030)					Percentage of "by function" activities out of Revenues for services + Revenues from co-payment charge					Percentage of "by function" activities, calculated using the Ministerial Decree mechanism				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 20	100.0	94.0	93.5	93.0	81.8	60.6	48.5	51.3	55.6	56.0	37.7	32.7	33.9	35.7	35.9
H.C. 21	100.0	95.6	94.8	94.3	93.6	48.8	41.6	44.3	44.7	41.8	32.8	29.4	30.7	30.9	29.5
Apulia total	***100.0***	***94.5***	***93.9***	***93.5***	***85.9***	***56.4***	***46.0***	***48.8***	***51.5***	***50.6***	***36.1***	***31.5***	***32.8***	***34.0***	***33.6***
H.C. 22	100.0	98.3	106.4	106.2	105.5	84.6	89.1	55.6	60.0	47.0	45.8	47.1	35.7	37.5	32.0
H.C. 23	100.0	99.1	93.4	93.0	91.8	67.8	67.7	56.2	38.6	38.2	40.4	40.4	36.0	27.9	27.6
H.C. 24	100.0	100.4	100.3	99.8	100.8	38.1	1.0	47.3	29.5	29.3	27.6	1.0	32.1	22.8	22.7
H.C. 25	100.0	97.9	92.2	91.8	92.9	67.1	62.2	55.7	52.3	38.4	40.2	38.3	35.8	34.4	27.8
Calabria Total	***100.0***	***98.7***	***97.7***	***97.4***	***97.3***	***69.3***	***63.6***	***54.7***	***47.4***	***39.6***	***40.9***	***38.9***	***35.4***	***32.2***	***28.4***
H.C. 26	100.0	94.7	102.2	98.7	95.4	59.1	55.2	55.3	44.2	43.2	37.1	35.5	35.6	30.7	30.1
H.C. 27	100.0	95.8	112.1	111.5	102.0	52.6	45.0	41.8	41.6	42.5	34.5	31.0	29.5	29.4	29.8
H.C. 28	100.0	97.4	108.0	107.4	103.5	63.7	60.3	57.5	52.9	52.6	38.9	37.6	36.5	34.6	34.5
H.C. 29	100.0	92.0	102.3	101.9	95.5	117.8	96.4	84.6	72.1	71.3	54.1	49.1	45.8	41.9	41.6
H.C. 30	100.0	99.4	114.1	113.6	140.3	45.9	39.0	36.6	41.8	47.4	31.5	28.1	26.8	29.5	32.2
H.C. 31	100.0	95.1	92.4	92.3	90.9	84.1	72.9	62.1	60.2	63.0	45.7	42.2	38.3	37.6	38.7
H.C. 32	100.0	88.8	102.2	101.7	93.5	103.3	101.7	86.2	77.2	85.3	50.8	50.4	46.3	43.6	46.0
H.C. 33	100.0	103.2	131.3	130.8	119.7	76.2	64.9	47.0	50.1	49.8	43.3	39.4	32.0	33.4	33.2
Sicily Total	***100.0***	***95.8***	***107.7***	***107.0***	***104.5***	***73.7***	***65.7***	***57.8***	***54.4***	***56.4***	***42.4***	***39.7***	***36.6***	***35.2***	***36.1***
SOUTH ITALY TOTAL	**100.0**	**96.1**	**101.9**	**101.3**	**98.0**	**68.7**	**60.6**	**55.3**	**52.4**	**52.0**	**40.7**	**37.7**	**35.6**	**34.4**	**34.2**
OVERALL TOTAL	**100.0**	**98.3**	**99.0**	**101.0**	**100.8**	**43.5**	**40.9**	**39.9**	**36.4**	**35.6**	**30.3**	**29.0**	**28.5**	**26.7**	**26.3**

(*) 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*

in 2014 (43.5%) and then gradually decreased in subsequent years. Thus this incidence has decreased, although it remains a substantial amount out of the total Revenues (more than 1/3). However, it is again appropriate to keep in mind the differences that exist among the Hospital Centers according to their geographical location:

- those operating in the North have a slightly lower percentage (31.5%) with some cases exceeding 40% or even 50% in Piedmont;
- those operating in Central Italy show an incidence of 22.1%;
- and finally, those operating in the South significantly increase the incidence, achieving 52.0% (with some peaks in a couple of Hospital Centers in Sicily exceeding 70%).

Therefore, there is a substantial stabilization of the incidence of "by-function" activities on Revenues for the Hospital Centers of the North and Center, while – despite a progressive contraction over the four-year period – it is still at high levels in the South: which suggests the improper use of the item "by-function" as an anomalous method of adjusting the Income Statements.

Finally, the last group of data in Table 24 shows the recalculation of the incidence of "by-function" activities, according to the mechanism of the aforementioned Ministerial Decree. This leads to a decrease in the percentages of this second group compared to the previous one, but there is also evidence that the maximum limits assumed by the Ministerial Decree (which was equal to 30%, calculated generously and improperly) were exceeded, as shown in the last column of Table 24. And this happens:

- for 2 out of 6 Hospital Centers in Piedmont;
- for 2 out of 3 Hospital Centers in Apulia;
- for 1 Hospital Center out of 4 in Calabria;
- and for 7 out of 8 Hospital Centers in Sicily.

The situation is therefore one of Income Statements that are still unbalanced with regard to "by-function" activities, especially in the Centers of the South.

Finally, the performance of the operating results of the Hospital Centers for the 5 years examined was considered, as well as the impact of these results on the revenues from services + the revenues from co-payment charges (see Table 25). The following reflections can be made about this:

a) the comparison between Revenues and Costs of the Hospital Centers of some Regions ends up in perfect balance, a situation that is completely unlikely in any type of Income Statement, public or private. It is therefore all too easy to hypothesize that the items were adjusted when preparing the final financial statement data. However, this does not mean that there is always and in any case an "improper" solution for the covering of

losses. But of course in some cases compensatory support interventions are possible through the use of the Revenue item for "by-function" activities.

Perfectly balanced Income Statement for the last year occurred at Centers in Veneto, Emilia Romagna, Marche and Sicily (for almost all the related Hospital Centers);

b) moreover, a decrease in losses between 2014 and 2018 can be observed in almost all the Hospital Centers examined, evidently to meet the objectives set by the 2015 and 2016 Stability Laws. There are further situations that still show significant losses in 2018, such as:
   - a Hospital Center in Piedmont which showed a negative result for the year that was clearly increased compared to previous years (having, among other things, decreased the quantity of "by-function" activities);
   - the Hospital Centers in Lazio continued their trend of reducing losses over the 5 years indicated (and their ongoing effort, as well as the transparency of the results should be acknowledged);
   - then there is a case of a Hospital Center in Apulia that has seen losses increase after a contraction in previous years;
   - and this also happened for two Hospital Centers in Calabria.

   In any case, it should be noted that, unlike in 2017 in which the incidence of the Revenue Losses from Services + Co-payment charges was 6.0%, in 2018 it rose to 7.4%. And to be more exact:
   - in Piedmont, it rose to 8.8%, due to a specific Hospital Center whose result showed a loss of 21.5% of revenues;
   - the results of the Lazio Hospital Centers remain in high double-digit percentages, but are decreasing year by year;
   - the Region of Apulia exceeds the limit of 7% (-9.3%) due to a specific Hospital Center which had negative results equal to -15.1%;
   - the Calabria Region exceeds 7% (-11.3%) with two Hospital Centers that even achieved -24.3% and -34.9% losses;
   - and finally, all the Sicilian Hospital Centers are in balance, but – as noted above – with a particularly high incidence of "by-function" activities.

Table 25 – Operating results of the Hospital Centers in the four years considered (in thousands of euros)

Hospital Centers	Operating results as per the IS (A.V.)					Percentage of the operating results (+/-) on Revenues from services + co-payment charges				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	- 10,147	- 7,716	0.0	1926	0.0	- 9.5	- 7.0	0.0	1.8	0.0
H.C. 2	- 12,852	- 18,864	- 6,428	- 2,406	0.0	- 6.8	- 9.6	- 3.2	- 1.2	0.0
H.C. 3	-5619	0.0	0.0	0.0	1156	- 3.2	0.0	0.0	0.0	0.6
H.C. 4	-5737	- 4,486	0.0	1180	0.0	- 3.8	- 2.8	0.0	0.7	0.0
H.C. 5	-8432	- 6,568	0.0	- 1,495	- 3,818	- 6.8	- 5.3	0.0	- 1.1	- 3.0
H.C. 6	- 30,648	- 15,081	- 11,040	-17478	-120997	- 5.6	- 2.7	- 2.0	- 3.2	- 21.5
Piedmont Total	***- 73,435***	***- 52,715***	***- 17,468***	***- 18,273***	***- 123,659***	***- 5.7***	***- 4.0***	***- 1.3***	***- 1.4***	***- 8.8***
H.C. 7	- 22,835	- 17,047	- 10,491	0.0	0.0	- 5.4	- 4.0	- 2.5	0.0	0.0
H.C. 8	- 13,451	1000	0.0	0.0	0.0	- 3.3	0.2	0.0	0.0	0.0
Veneto total	***- 36,286***	***- 17,047***	***- 10,491***	***0.0***	***0.0***	***- 4.4***	***- 2.0***	***- 1.2***	***0.0***	***0.0***
H.C. 9	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
H.C. 11	0.0	0.0	0.0	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	0.0	0.0	0.0
Emilia Romagna Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
NORTH ITALY TOTAL	**- 109,721**	**- 69,762**	**- 27,959**	**- 18,273**	**- 123,659**	**- 3.3**	**- 2.1**	**- 0.8**	**- 0.5**	**- 3.4**
H.C. 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H.C. 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marche Total	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
H.C. 15	- 158,632	- 161,799	- 155,718	- 130,712	- 116,314	- 64.8	- 67.9	- 68.0	- 57.1	- 54.4
H.C. 16	- 102,291	- 98,853	- 81,733	- 83,599	- 77,401	- 85.9	- 73.3	- 62.3	- 63.8	- 59.7
H.C. 17	- 74,610	- 92,543	- 140,252	- 104,166	- 87,743	- 23.6	- 28.5	- 42.9	- 31.1	- 25.5
H.C. 18	- 53,708	- 54,160	- 49,108	- 41,510	- 40,432	- 39.2	- 38.3	- 33.9	- 27.3	- 25.1
H.C. 19	- 73,601	- 62,567	- 41,794	- 24,902	- 19,500	- 40.4	- 32.3	- 21.1	- 12.2	- 9.3
Lazio Total	***- 462,842***	***- 469,922***	***- 468,605***	***- 384,889***	***- 341,390***	***- 46.3***	***- 45.5***	***- 45.5***	***- 36.6***	***- 32.3***
CENTRAL ITALY TOTAL	**- 462,842**	**- 469,922**	**- 468,605**	**- 384,889**	**- 341,390**	**- 32.8**	**- 32.6**	**- 32.2**	**- 25.6**	**- 22.2**

./.

(Continued) *Table 25 – Operating results of the Hospital Centers in the four years considered (in thousands of euros)*

Hospital Centers	Operating results as per the IS (A.V.)					Percentage of the operating results (+/-) on Revenues from services + co-payment charges				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 20	0.0	-28102	-19736	-9740	-41114	0.0	- 8.7	- 6.5	- 3.4	- 15.1
H.C. 21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apulia total	***0.0***	***- 28,102***	***- 19,736***	***- 9,740***	***- 41,114***	***0.0***	***- 5.6***	***- 4.2***	***- 2.1***	***- 9.3***
H.C. 22	-6007	-1880	0.0	0.0	0.0	- 6.1	- 1.9	0.0	0.0	0.0
H.C. 23	-3764	-2265	0.0	- 12,930	- 27,743	- 3.9	- 2.3	0.0	- 11.4	- 24.3
H.C. 24	*-14562*	*- 29,858*	*- 42,000*	*- 12,319*	*- 20,942*	- 38.7	- 67.1	- 86.7	- 20.6	- 34.9
H.C. 25	-17377	-20279	0.0	0.0	0.0	- 18.2	- 21.5	0.0	0.0	0.0
Calabria Total	***- 41,710***	***- 54,282***	***- 42,000***	***- 25,249***	***- 48,685***	***- 12.6***	***- 16.2***	***- 11.1***	***- 6.2***	***- 11.3***
H.C. 26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H.C. 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H.C. 28	788	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
H.C. 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H.C. 30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H.C. 31	2456	2680	0.0	0.0	0.0	1.6	1.6	0.0	0.0	0.0
H.C. 32	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
H.C. 33	2209	0.0	1120	0.0	1666	1.8	0.0	0.7	0.0	1.0
Sicily Total	***5453***	***2680***	***1120***	***0.0***	***1666***	***0.5***	***0.2***	***0.1***	***0.0***	***0.1***
SOUTH ITALY TOTAL	**- 36,257**	**- 79,704**	**- 60,616**	**- 34,989**	**- 88,133**	**- 1.9**	**- 3.9**	**- 2.8**	**- 1.6**	**- 4.0**
OVERALL TOTAL	**- 608,820**	**- 619,388**	**- 557,180**	**- 438,151**	**- 553,182**	**- 9.2**	**- 9.0**	**- 7.9**	**- 6.0**	**- 7.4**

(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, 2019*

Part Two

Statistical Indicators

 ISBN 9788835112747

 ISBN 9788835112747

1. Facility data

1.1. Number of public and accredited private medical institutions

Given the lack of a complete version of the database linked to the 2017 "Administrative and Economic Activities of the Local Health Authorities and Hospital Centers" Report, from which most of the facility and activity data for the sector presented in Part Four has been taken, again this year the alternative Ministerial "Open Data" source was used in its updated 2010-2017 version. 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 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, was aimed at the less-qualified production activities of long-term care or assisted living. More in general, data from the Ministry of Health indicate for 2017 a further reduction compared to twenty units among the hospitals under the direct management of the local health authority the year before, of seven accredited hospitals. Compared to 2013, the new reference year for the data presented, it can be seen that the total of public and private institutions decreased from 1,034 to 1,003 units in 2017, a total reduction of -6.2%. Tables S/1 and S/2 show, in particular:

– in the public sector, above all a reduction in the directly managed Hospitals (-9.7%), followed by the Hospital Centers integrated with universities (-15.8%), for the most part probably merged into the ranks of the Hospital Centers integrated with the NHS, which increased by 12.5% between 2013 and 2017; overall, public healthcare and assimilated institutions have seen a gradual decline during the period considered, with a final change of -7.5%, although it must be pointed out that there are more reconversions of types or aggregations than of real divestments;
– in the context of accredited hospitals (those which the Ministry classifies as accredited healthcare facilities), there is confirmation of the trend towards a less pronounced downsizing, which saw its presence in the hospital system decrease from 509 units in 2013 to 485 in 2017 (-4.7%).

The ratio of publicly-operated hospital component to privately-operated hospital component of the National Health Service within the total number of hospital institutions shows a national average of 44.2% for the former and 55.8% 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 2017, 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, Abruzzo, Umbria, Tuscany and in the autonomous provinces of Bolzano and Trento;
– the presence of a somewhat mixed system (with greater balance between the types of institutions) is instead found mainly in the Aosta Valley, Liguria, Apulia, and Sicily.

1.2. Bed distribution

Focusing on the analysis of number of patient 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 nearly 189,000 patient beds available in 2017, divided up in a rather stable distribution over time, i.e. 69.8% belonging to the publicly-operated coPmponent and 30.2% to the privately-operated component (Table S/5).

With the exception of Lazio, a situation which sees a truly mixed system in operation also in terms of patient beds, the territorial distribution throughout the rest of Italy sees a more or less clear prevalence of public facilities, a prevalence accentuated also by the disconcerting measures relating to the reorganization of the hospital network, which have already undergone complete transposition in many regions.

For the component of the accredited private sector offer represented by the AIOP facilities, it is instead possible to present an update to 2019, with a comparison limited to 2017 compared to the other private service components in Table S/6. This shows almost 31,000 patient 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 institutions in 2019 shows a concentration among NHS accredited facilities according to the most prevalent nosological classifications (Table S/7):

– multi-specialist (173 out of 466 institutions);
– RSA/assisted living homes (93 out of 466 institutions).
– surgical (66 out of 466 institutions);
– rehabilitation (64 out of 466 institutions);
– neuro-psychiatry (34 out of 466 institutions);
– long-stay care (21 out of 466 institutions);
– medical (15 out of 466 institutions).

If we consider the different types of activities (see Tables S/8 and S/9), also belonging to the AIOP-associated institutions (2019), the greater concentrations at the national level are, in descending order: surgical, medical, rehabilitation, assisted living homes (R.S.A., Residenze Sanitarie Assistenziali), long-stay care and neuro-psychiatry. There is also a large and significant amount for highly specialized areas (almost 1,000 patient beds), especially cardiac surgery.

1.3. Medical equipment

Even the distribution of allocations of equipment can take advantage of 2017 overhaul of 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 new situation is now available as per regional distribution and type of equipment from Table S/10 (Public Facili-

ties), S/11 (Accredited Hospitals type 5.1) and S/13 (for Non-accredited private healthcare facilities).

The data for the first two types of facilities confirms 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 hospitals 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 accredited hospitals

	2013		2014		2015		2016		2017	
	A.V.	*%*	*A.V.*	*%*	*A.V.*	*%*	*A.V.*	*%*	*A.V.*	*%*
– Hospital Centers	59	5.5	59	5.6	57	5.4	57	5.5	55	5.5
– Directly managed hospitals	362	33.9	350	33.1	351	33.5	347	33.6	327	32.6
– Hospital Centers integrated with the NHS	8	0.7	9	0.9	9	0.9	9	0.9	9	0.9
– Hospital Centers integrated with universities	19	1.8	18	1.7	18	1.7	18	1.7	16	1.6
– University Polyclinics	2	0.2	2	0.2	2	0.2	2	0.2	2	0.2
– Institutes for Treatment and Research	62	5.8	62	5.9	64	6.1	63	6.1	63	6.3
– Religiously-affiliated classif. hospitals	28	2.6	28	2.7	27	2.6	26	2.5	27	2.7
– Institutes-ASL Facilities	17	1.6	19	1.8	18	1.7	18	1.7	17	1.7
– Research facilities	3	0.3	3	0.3	2	0.2	2	0.2	2	0.2
Total public and assimilated institutions	*560*	*52.4*	*550*	*52.1*	*548*	*52.2*	*542*	*52.4*	*518*	*51.6*
– Accredited hospitals[1]	509	47.6	506	47.9	501	47.8	492	47.6	485	48.4
Grand Total	*1069*	*100.0*	*1056*	*100.0*	*1049*	*100.0*	*1034*	*100.0*	*1003*	*100.0*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

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 2014-2017*

Table S/2 – Evolution in the number of public and assimilated, and accredited hospitals (% increase)

	2014/2013	*2015/2014*	*2016/2015*	*2017/2016*	*2017/2013*
– Hospital Centers	0.0	-3.4	0.0	-3.5	-6.8
– Directly managed hospitals	-3.3	0.3	-1.1	-5.8	-9.7
– Hospital Centers integrated with the NHS	12.5	0.0	0.0	0.0	12.5
– Hospital Centers integrated with universities	-5.3	0.0	0.0	-11.1	-15.8
– University Polyclinics	0.0	0.0	0.0	0.0	0.0
– Institutes for Treatment and Research	0.0	3.2	-1.6	0.0	1.6
– Religiously-affiliated classif. hospitals	0.0	-3.6	-3.7	3.8	-3.6
– Institutes-ASL Facilities	11.8	-5.3	0.0	-5.6	0.0
– Research facilities	0.0	-33.3	0.0	0.0	-33.3
Total public and assimilated institutions	*-1.8*	*-0.4*	*-1.1*	*-4.4*	*-7.5*
– Accredited hospitals[1]	-0.6	-1.0	-1.8	-1.4	-4.7
Grand Total	*-1.2*	*-0.7*	*-1.4*	*-3.0*	*-6.2*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

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 2014-2017*

Table S/3 – Publicly-operated and privately-operated institutions of the NHS by Region. Year 2017 (A.V.)

Regions	*Publicly-operated institutions*					*Privately-operated institutions*						*Total Institutions*
	Hospital Centers	*Directly managed hospitals*	*Hospital Centers integrated with the NHS*	*Hospital Centers integrated with universities*	*Public Institutes for Treatment and Research and Foundations*	*Private University Polyclinics*	*Private Institutes for Treatment and Research*	*Religiously-affiliated classif. hospitals*	*Institutes-ASL Facilities*	*Research facilities*	*Accredited private hospitals*[1]	
Piedmont	3	21	-	3	-	-	3	-	6	-	38	74
Aosta Valley	-	1	-	-	-	-	-	-	-	-	1	2
Lombardy	27	-	-	-	5	-	21	5	-	-	66	124
A.P. of Bolzano	-	7	-	-	-	-	-	-	-	-	6	13
A.P. of Trento	-	7	-	-	-	-	-	1	-	-	5	13
Veneto	1	9	-	1	2	-	1	5	4	-	17	40
Friuli V.G.	-	8	-	-	2	-	-	-	-	-	5	15
Liguria	-	6	-	-	2	-	1	2	-	-	5	16
Emilia R.	1	15	-	4	2	-	1	-	1	-	44	68
Tuscany	-	31	-	4	1	-	1	-	2	1	22	62
Umbria	2	8	-	-	-	-	-	-	-	-	6	16
Marche	2	5	-	-	1	-	-	-	-	-	14	22
Lazio	2	34	1	2	3	2	3	8	2	-	60	117
Abruzzo	-	17	-	-	-	-	-	-	-	-	10	27
Molise	-	3	-	-	-	-	1	-	-	1	3	8
Campania	6	32	2	1	1	-	1	3	1	-	63	110
Apulia	-	25	1	1	4	-	1	2	-	-	26	60
Basilicata	1	7	-	-	1	-	-	-	-	-	1	10
Calabria	4	17	-	-	1	-	-	-	-	-	26	48
Sicily	5	52	3	-	2	-	2	1	1	-	59	125
Sardinia	1	22	2	-	-	-	-	-	-	-	8	33
North	32	74	-	8	13	-	27	13	11	-	187	365
Center	6	78	1	6	5	2	4	8	4	1	102	217
South	17	175	8	2	9	-	5	6	2	1	196	421
Italy	*55*	*327*	*9*	*16*	*27*	*2*	*36*	*27*	*17*	*2*	*485*	*1003*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health, Open Data 2017*

Table S/4 – Publicly-operated and privately-operated institutions of the NHS by Region. Year 2017 (%)

Regions	Publicly-operated institutions					Privately-operated institutions								
	Hospital Centers	*Directly managed hospitals*	*Hospital Centers integrated with the NHS*	*Hospital Centers integrated with universities*	*Public Institutes for Treatment and Research and Foundations*	*Private University Polyclinics*	*Private Institutes for Treatment and Research*	*Religiously-affiliated classif. hospitals*	*Institutes-ASL Facilities*	*Research facilities*	*Accredited private hospitals*[1]	*Publicly-operated component*	*Privately-operated component*	*Total Institutions*
Piedmont	4.1	28.4	0.0	4.1	0.0	0.0	4.1	0.0	8.1	0.0	51.4	36.5	63.5	100.0
Aosta Valley	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	50.0	100.0
Lombardy	21.8	0.0	0.0	0.0	4.0	0.0	16.9	4.0	0.0	0.0	53.2	25.8	74.2	100.0
A.P. of Bolzano	0.0	53.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.2	53.8	46.2	100.0
A.P. of Trento	0.0	53.8	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	38.5	53.8	46.2	100.0
Veneto	2.5	22.5	0.0	2.5	5.0	0.0	2.5	12.5	10.0	0.0	42.5	32.5	67.5	100.0
Friuli V.G.	0.0	53.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	33.3	66.7	33.3	100.0
Liguria	0.0	37.5	0.0	0.0	12.5	0.0	6.3	12.5	0.0	0.0	31.3	50.0	50.0	100.0
Emilia R.	1.5	22.1	0.0	5.9	2.9	0.0	1.5	0.0	1.5	0.0	64.7	32.4	67.6	100.0
Tuscany	0.0	50.0	0.0	6.5	1.6	0.0	1.6	0.0	3.2	1.6	35.5	58.1	41.9	100.0
Umbria	12.5	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5	62.5	37.5	100.0
Marche	9.1	22.7	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	63.6	36.4	63.6	100.0
Lazio	1.7	29.1	0.9	1.7	2.6	1.7	2.6	6.8	1.7	0.0	51.3	35.9	64.1	100.0
Abruzzo	0.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0	63.0	37.0	100.0
Molise	0.0	37.5	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	37.5	37.5	62.5	100.0
Campania	5.5	29.1	1.8	0.9	0.9	0.0	0.9	2.7	0.9	0.0	57.3	38.2	61.8	100.0
Apulia	0.0	41.7	1.7	1.7	6.7	0.0	1.7	3.3	0.0	0.0	43.3	51.7	48.3	100.0
Basilicata	10.0	70.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	90.0	10.0	100.0
Calabria	8.3	35.4	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	54.2	45.8	54.2	100.0
Sicily	4.0	41.6	2.4	0.0	1.6	0.0	1.6	0.8	0.8	0.0	47.2	49.6	50.4	100.0
Sardinia	3.0	66.7	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.2	75.8	24.2	100.0
North	8.8	20.3	0.0	2.2	3.6	0.0	7.4	3.6	3.0	0.0	51.2	34.8	65.2	100.0
Center	2.8	35.9	0.5	2.8	2.3	0.9	1.8	3.7	1.8	0.5	47.0	44.2	55.8	100.0
South	4.0	41.6	1.9	0.5	2.1	0.0	1.2	1.4	0.5	0.2	46.6	50.1	49.9	100.0
Italy	*5.5*	*32.6*	*0.9*	*1.6*	*2.7*	*0.2*	*3.6*	*2.7*	*1.7*	*0.2*	*48.4*	*43.3*	*56.7*	*100.0*

(1) Code 5.1 institutes (accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health, Open Data 2017*

Table S/5 – Patient beds of publicly- and privately-operated components of the NHS used for inpatient admissions, by Region. Year 2017

Regions	2017						2016		
	Publicly-operated component of the NHS (1)		Privately-operated component of the NHS (1)		Total 2017		Publicly-operated component of the NHS	Privately-operated component of the NHS	Total
	Patient beds	% of the total	Patient beds	% of the total	Patient beds	% of the total	% of the total	% of the total	
Piedmont	10,140	69.2	4,517	30.8	14,657	100.0	69.1	30.9	100.0
Aosta Valley	380	84.3	71	15.7	451	100.0	84.2	15.8	100.0
Lombardy	21,814	62.4	13,124	37.6	34,938	100.0	62.5	37.5	100.0
A.P. of Bolzano	1,558	84.5	285	15.5	1,843	100.0	84.9	15.1	100.0
A.P. of Trento	1,253	66.1	643	33.9	1,896	100.0	66.5	33.5	100.0
Veneto	12,812	80.5	3,105	19.5	15,917	100.0	80.5	19.5	100.0
Friuli V.G.	3,430	89.5	403	10.5	3,833	100.0	90.6	9.4	100.0
Liguria	4,150	83.1	844	16.9	4,994	100.0	83.6	16.4	100.0
Emilia R.	12,462	75.7	3,991	24.3	16,453	100.0	76.1	23.9	100.0
Tuscany	8,547	82.7	1793	17.3	10,340	100.0	82.3	17.7	100.0
Umbria	2,623	91.0	259	9.0	2,882	100.0	91.4	8.6	100.0
Marche	3,803	82.4	812	17.6	4,615	100.0	84.2	15.8	100.0
Lazio	9,138	49.6	9,293	50.4	18,431	100.0	50.1	49.9	100.0
Abruzzo	2,986	76.3	927	23.7	3,913	100.0	73.9	26.1	100.0
Molise	659	62.4	397	37.6	1,056	100.0	56.9	43.1	100.0
Campania	9,035	58.8	6,337	41.2	15,372	100.0	59.2	40.8	100.0
Apulia	8,410	72.2	3,236	27.8	11,646	100.0	72.6	27.4	100.0
Basilicata	1,644	97.6	40	2.4	1,684	100.0	94.7	5.3	100.0
Calabria	3,222	65.9	1,666	34.1	4888	100.0	66.3	33.7	100.0
Sicily	9,099	65.4	4,817	34.6	13,916	100.0	66.5	33.5	100.0
Sardinia	4,070	81.0	953	19.0	5,023	100.0	82.7	17.3	100.0
North	67,999	71.6	26,983	28.4	94,982	100.0	71.7	28.3	100.0
Center	24,111	66.5	12,157	33.5	36,268	100.0	67.0	33.0	100.0
South	39,125	68.0	18,373	32.0	57,498	100.0	68.3	31.7	100.0
Italy	*131,235*	*69.5*	*57,513*	*30.5*	*188,748*	*100.0*	*69.8*	*30.2*	*100.0*

(1) For the classification of the institutions see Table S/3.

Source: *processing by Ermeneia – data from the Ministry of Health, Open Data 2017*

Table S/6 – NHS Accredited Hospitals[1], by Region– Institutions and Patient beds. Year 2017

	AIOP		ARIS		Other		Total	
	Institutions	*Accred. patient beds*	*Institutions*	*Accred. patient beds*	*Institutions*	*Accred. patient beds*	*Institutions*	*Accred. patient beds*
– Piedmont	23	1,830	6	604	9	657	38	3091
– Aosta Valley	1	71	-	-	-	-	1	71
– Lombardy	39	4,630	14	1,929	13	980	66	7,539
– Bolzano	3	176	1	33	2	76	6	285
– Trento	3	310	1	83	1	145	5	538
– Veneto	17	1546	-	-	-	-	17	1546
– Friuli V.G.	3	286	-	-	2	117	5	403
– Liguria	2	135	1	12	2	124	5	271
– Emilia R.	41	3,602	1	76	2	127	44	3,805
– Tuscany	13	881	6	247	3	307	22	1,435
– Umbria	4	134	1	60	1	65	6	259
– Marche	10	579	3	233	1	-	14	812
– Lazio	42	3,188	5	300	13	1233	60	4,721
– Abruzzo	8	840	2	87	-	-	10	927
– Molise	2	100	-	-	1	40	3	140
– Campania	56	4,988	-	-	7	597	63	5,585
– Apulia	23	2,100	1	54	2	133	26	2,287
– Basilicata	1	40	-	-	-	-	1	40
– Calabria	15	1,048	-	-	11	618	26	1,666
– Sicily	51	3,551	-	-	8	336	59	3,887
– Sardinia	7	903	-	-	1	50	8	953
– North	132	12,586	24	2,737	31	2,226	187	17,549
– Center	69	4,782	15	840	18	1,605	102	7,227
– South	163	13,570	3	141	30	1,774	196	15485
Italy	*364*	*30,938*	*42*	*3,718*	*79*	*5,605*	*485*	*40,261*
%	*75.4*	*76.8*	*8.7*	*9.2*	*16.3*	*13.9*	*100.0*	*100.0*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health, Open Data 2017 and AIOP*

Table S/7 – Regional distribution of AIOP-associated institutions according to the most prevalent nosological classifications–Year 2019

Regions	Multi-specialist		Medical		Surgical		Neuro-psychiatry		Long-stay care pts		Rehabilitation		RSA/ Assisted living homes		Totals		Rehabilitation Centers	
	Accredited	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*
– Piedmont	14	3	-	-	-	1	5	-	3	-	4	-	4	-	30	4	-	-
– Aosta Valley	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
– Lombardy	26	2	2	-	2	1	2	-	-	-	13	-	20	-	65	3	1	-
– A.P. of Bolzano	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-	-
– A.P. of Trento	1	-	-	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-
– Veneto	11	1	-	-	1	-	3	-	-	-	4	-	2	-	21	1	-	-
– Friuli V.G.	2	-	-	-	-	-	-	-	-	-	1	-	1	1	4	1	-	-
– Liguria	1	2	-	-	-	-	-	-	-	-	1	-	-	-	2	2	-	-
– Emilia R.	24	1	1	-	1	-	6	-	3	-	7	-	5	-	47	1	-	-
– Tuscany	6	-	1	-	6	2	2	-	1	-	1	-	-	-	17	2	1	-
– Umbria	1	-	-	-	2	-	-	-	1	-	1	-	1	-	6	-	-	-
– Marche	7	-	-	-	-	-	1	-	1	-	1	-	-	-	10	-	1	-
– Lazio	18	10	5	-	8	8	7	-	4	-	6	-	43	1	91	19	5	-
– Abruzzo	1	-	-	-	-	-	-	-	-	-	1	-	1	-	3	-	2	-
– Molise	3	-	-	-	-	-	-	-	-	-	1	-	-	-	4	-	-	-
– Campania	24	-	2	-	13	1	5	-	4	-	7	-	-	-	55	1	1	-
– Apulia	9	-	1	-	1	-	-	-	-	-	1	-	5	-	17	-	6	-
– Basilicata	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
– Calabria	1	-	1	-	9	1	-	-	-	-	5	-	4	-	20	1	-	-
– Sicily	20	-	2	-	20	-	3	-	-	-	6	-	7	-	58	-	-	-
– Sardinia	4	-	-	-	3	-	-	-	1	-	-	-	-	-	8	-	-	-
North	79	9	3	-	4	2	16	-	8	-	34	-	32	1	176	12	1	-
Center	32	10	6	-	16	10	10	-	7	-	9	-	44	1	124	21	7	-
South	62	-	6	-	46	2	8	-	6	-	21	-	17	-	166	2	9	-
Italy	*173*	*19*	*15*	-	*66*	*14*	*34*	-	*21*	-	*64*	-	*93*	*2*	*466*	*35*	*17*	-

Source: *AIOP*

Table S/8 – Regional distribution of patient beds of the AIOP-associated institutions according to the different types of activities – Year 2019

Regions	*High Specialty*		*Medical*		*Surgical*		*Neuro-psychiatry*		*Long-stay care pts*		*Rehabilitation*		*RSA/ Assisted living homes*		*Totals*		*Rehabilitation Centers*	
	Accredited	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*
– Piedmont	90	10	404	86	692	250	292	32	413	18	589	10	408	-	2,888	406	-	-
– Aosta Valley	-	-	-	-	12	4	-	-	-	-	64	-	-	-	76	4	-	-
– Lombardy	441	18	2,819	106	3,013	185	103	20	13	-	2,098	55	2,679	24	11,166	408	60	-
– A.P. of Bolzano	-	-	15	8	-	-	-	-	20	22	169	33	-	-	204	63	-	-
– A.P. of Trento	-	-	98	15	38	-	-	-	167	17	25	-	21	-	349	32	-	-
– Veneto	8	-	446	87	622	205	362	48	70	-	624	94	332	-	2,464	434	-	-
– Friuli V.G.	-	-	94	17	153	20	-	-	-	-	108	-	75	77	430	114	-	-
– Liguria	15	-	43	47	15	73	-	-	-	-	67	-	-	-	140	120	-	-
– Emilia R.	73	2	1,057	35	1,504	159	605	2	570	5	914	45	475	170	5,198	418	-	-
– Tuscany	21	-	224	1	687	91	105	1	182	-	412	10	-	-	1,631	103	126	-
– Umbria	-	-	3	-	130	-	-	-	43	-	132	-	20	20	328	20	-	-
– Marche	-	-	202	-	279	-	50	-	112	-	98	-	104	-	845	-	40	-
– Lazio	-	64	1,282	422	1,608	1,097	623	8	592	63	1,109	474	3,780	215	8.994	2,343	684	-
– Abruzzo	-	-	129	30	100	38	100	-	-	-	78	76	28	27	435	171	303	-
– Molise	40	-	157	52	114	-	-	-	-	-	89	100	-	-	400	152	-	-
– Campania	79	13	982	265	2,211	408	473	121	524	55	1,022	12	-	-	5,291	874	99	-
– Apulia	78	-	422	67	502	126	-	-	-	-	330	28	583	258	1,915	479	1,234	27
– Basilicata	-	-	-	-	-	-	-	-	16	-	166	-	120	-	302	-	54	-
– Calabria	-	-	48	3	434	30	-	-	125	-	456	-	182	-	1245	33	-	-
– Sicily	87	2	1,251	24	1,830	23	145	23	101	1	620	43	335	78	4,369	194	-	-
– Sardinia	-	-	169	-	328	-	-	-	85	-	124	-	-	-	706	-	-	-
North	627	30	4,976	401	6049	896	1,362	102	1,253	62	4,658	237	3,990	271	22,915	1,999	60	-
Center	21	64	1,711	423	2,704	1,188	778	9	929	63	1,751	484	3,904	235	11,798	2,466	850	-
South	284	15	3,158	441	5,519	625	718	144	851	56	2,885	259	1,248	363	14,663	1,903	1,690	27
Italy	*932*	*109*	*9,845*	*1,265*	*14,272*	*2,709*	*2,858*	*255*	*3,033*	*181*	*9,294*	*980*	*9,142*	*869*	*49,376*	*6,368*	*2,600*	*27*

Source: *AIOP*

Table S/9 – Regional distribution of patient beds of the AIOP-associated institutions according to the different types of activities and regions. Year 2019 (Composition %)

Regions	*High Specialty*		*Medical*		*Surgical*		*Neuro-psychiatry*		*Long-stay care pts*		*Rehabilitation*		*RSA/ Assisted living homes*		*Total*	
	Accredited	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*	*Accredited*	*Non-accredited*
– Piedmont	3.1	2.5	14.0	21.2	24.0	61.6	10.1	7.9	14.3	4.4	20.4	2.5	14.1	-	100.0	100.0
– Aosta Valley	-	-	-	-	15.8	100.0	-	-	-	-	84.2	-	-	-	100.0	100.0
– Lombardy	3.9	4.4	25.2	26.0	27.0	45.3	0.9	4.9	0.1	-	18.8	13.5	24.0	5.9	100.0	100.0
– A.P. of Bolzano	-	-	7.4	12.7	-	-	-	-	9.8	34.9	82.8	52.4	-	-	100.0	100.0
– A.P. of Trento	-	-	28.1	46.9	10.9	-	-	-	47.9	53.1	7.2	-	6.0	-	100.0	100.0
– Veneto	0.3	-	18.1	20.0	25.2	47.2	14.7	11.1	2.8	-	25.3	21.7	13.5	-	100.0	100.0
– Friuli V.G.	-	-	21.9	14.9	35.6	17.5	-	-	-	-	25.1	-	17.4	67.5	100.0	100.0
– Liguria	10.7	-	30.7	39.2	10.7	60.8	-	-	-	-	47.9	-	-	-	100.0	100.0
– Emilia R.	1.4	0.5	20.3	8.4	28.9	38.0	11.6	0.5	11.0	1.2	17.6	10.8	9.1	40.7	100.0	100.0
– Tuscany	1.3	-	13.7	1.0	42.1	88.3	6.4	1.0	11.2	-	25.3	9.7	-	-	100.0	100.0
– Umbria	-	-	0.9	-	39.6	-	-	-	13.1	-	40.2	-	6.1	100.0	100.0	100.0
– Marche	-	-	23.9	-	33.0	-	5.9	-	13.3	-	11.6	-	12.3	-	100.0	-
– Lazio	-	2.7	14.3	18.0	17.9	46.8	6.9	0.3	6.6	2.7	12.3	20.2	42.0	9.2	100.0	100.0
– Abruzzo	-	-	29.7	17.5	23.0	22.2	23.0	-	-	-	17.9	44.4	6.4	15.8	100.0	100.0
– Molise	10.0	-	39.3	34.2	28.5	-	-	-	-	-	22.3	65.8	-	-	100.0	100.0
– Campania	1.5	1.5	18.6	30.3	41.8	46.7	8.9	13.8	9.9	6.3	19.3	1.4	-	-	100.0	100.0
– Apulia	4.1	-	22.0	14.0	26.2	26.3	-	-	-	-	17.2	5.8	30.4	53.9	100.0	100.0
– Basilicata	-	-	-	-	-	-	-	-	5.3	-	55.0	-	39.7	-	100.0	-
– Calabria	-	-	3.9	9.1	34.9	90.9	-	-	10.0	-	36.6	-	14.6	-	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	-	-	23.9	-	46.5	-	-	-	12.0	-	17.6	-	-	-	100.0	-
North	2.7	1.5	21.7	20.1	26.4	44.8	5.9	5.1	5.5	3.1	20.3	11.9	17.4	13.6	100.0	100.0
Center	0.2	2.6	14.5	17.2	22.9	48.2	6.6	0.4	7.9	2.6	14.8	19.6	33.1	9.5	100.0	100.0
South	1.9	0.8	21.5	23.2	37.6	32.8	4.9	7.6	5.8	2.9	19.7	13.6	8.5	19.1	100.0	100.0
Italy	*1.9*	*1.7*	*19.9*	*19.9*	*28.9*	*42.5*	*5.8*	*4.0*	*6.1*	*2.8*	*18.8*	*15.4*	*18.5*	*13.6*	*100.0*	*100.0*

Source: *AIOP*

Table S/10 – Technical and biomedical equipment for diagnosis and treatment in public hospital and assimilated facilities. Year 2017

Regions	*HC*	*Echo*	*CT*	*HD*	*ACCA*	*MON*	*MRI*	*OT*	*RU*	*LV*	*PXU*	*LINAC*	*RCT*	*AIA*	*CGC*	*AM*	*SI*	*ADC*
Piedmont		1,094	86	1,265	182	3599	40	526	212	1,040	196	30	98	343	24	647	1,148	95
Aosta Valley		36	2	26	5	153	3	17	5	38	7	1	1	23		21	40	6
Lombardy	2	2,821	179	2,274	332	9,538	127	1,126	588	2,418	430	68	202	689	49	1,270	3,318	198
A.P. of Bolzano		180	8	115	22	657	5	63	44	150	30		9	35	1	88	414	16
A.P. of Trento		135	12	133	13	550	7	79	6	210	20	4	9	38	2	67	348	15
Veneto		1,384	83	1,028	200	4,774	69	748	201	1,963	235	29	88	324	22	728	2,154	100
Friuli V.G.	1	377	22	436	55	1,438	13	232	41	323	50	11	19	130	4	160	760	33
Liguria	2	431	37	538	73	1,553	27	230	95	506	91	14	38	178	7	249	527	52
Emilia R.		1,210	84	1,173	120	4,560	54	683	176	1,799	220	28	96	408	13	755	1,902	118
Tuscany	4	1,414	86	1,165	178	4,424	51	553	227	1,695	238	25	89	522	23	619	1,740	96
Umbria	-	311	22	459	37	729	13	147	32	254	38	8	30	165	5	160	349	40
Marche		509	32	405	41	1,104	22	156	83	367	64	10	38	152	16	170	478	47
Lazio	3	1,242	119	1,177	161	4,547	81	575	248	1,404	231	43	143	499	27	761	1,611	158
Abruzzo		368	25	448	96	845	10	151	49	358	64	8	30	141	12	130	336	37
Molise		70	8	102	46	217	9	45	19	60	25	2	6	24	5	46	104	15
Campania	9	932	88	553	224	3,209	24	484	224	1,090	201	18	103	322	12	640	969	157
Apulia	2	960	72	1,304	345	2,340	38	373	211	852	143	19	108	377	23	431	816	173
Basilicata		169	13	166	19	376	8	84	45	157	25	3	22	57	5	77	169	20
Calabria	4	314	34	431	70	915	14	143	51	265	53	11	47	144	22	192	257	47
Sicily	11	1,058	111	671	262	3,955	58	502	242	1,161	270	23	121	321	32	679	1,246	144
Sardinia	3	466	35	551	126	1,263	25	175	87	401	77	8	45	169	11	205	466	56
North	5	7,668	513	6,988	1,002	26,822	345	3,704	1,368	8,447	1,279	185	560	2,168	122	3,985	10,611	633
Center	7	3,476	259	3,206	417	10,804	167	1,431	590	3,720	571	86	300	1,338	71	1,710	4,178	341
South	29	4,337	386	4,226	1,188	13,120	186	1,957	928	4,344	858	92	482	1,555	122	2,400	4,363	649
Italy	*41*	*15,481*	*1,158*	*14,420*	*2,607*	*50,746*	*698*	*7,092*	*2,886*	*16,511*	*2,708*	*363*	*1,342*	*5,061*	*315*	*8,095*	*19,152*	*1,623*

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*

Table S/11 – Technical and biomedical equipment for diagnosis and treatment in accredited hospitals[1]. Year 2017

Regions	*HC*	*Echo*	*CT*	*HD*	*ACCA*	*MON*	*MRI*	*OT*	*RU*	*LV*	*PXU*	*LINAC*	*RCT*	*AIA*	*CGC*	*AM*	*SI*	*ADC*
Piedmont	1	123	14	3	29	317	18	69	41	68	33	1	29	29	1	78	90	30
Aosta Valley	6	580	49	205	107	1,682	50	246	141	403	85	17	58	93	3	252	524	62
Lombardy		10	2		1	7	3		4		2	3	2	2			2	1
A.P. of Bolzano		17	3		2	14	3	4	4	4	2		2	2		4	9	4
A.P. of Trento		100	12	1	21	247	16	45	24	43	21		9	17		47	77	15
Veneto		44	4	23	10	60	8	22	9	14	5		5	9		21	26	7
Friuli V.G.		11	1	2	5	53		9	4	17	7		4	3		12	13	5
Liguria	1	178	23	77	24	561	33	134	48	191	71	2	38	21	2	146	241	23
Emilia R.		72	13	23	24	325	8	64	27	88	26	2	18	13		64	86	22
Tuscany		13	4		5	46	3	17	8	11	13		6	2		17	20	3
Umbria		52	9		10	148	9	31	22	41	22		12	16		32	56	11
Marche	1	176	36	526	67	581	31	151	128	134	64	3	62	71	6	170	233	62
Lazio		54	8	9	17	130	13	30	13	36	14		20	19		29	50	10
Abruzzo		10	3		7	16		4	5	10	3		4	3		5	6	3
Molise	5	265	52	60	83	648	28	206	102	244	66	4	68	77	21	245	295	79
Campania		137	22	57	47	369	13	68	45	142	37	3	30	39	2	78	130	30
Apulia			19		1	216	15	72		107	31		26					1
Basilicata	3	100	45	3	34	487	27	154	31	195	71	1	61	21	9	79	91	30
Calabria	2	205	5	23	99	125	2	35	85	33	11	6	10	50	6	184	243	69
Sicily		55	1	114	20	6		2	13	2	1		1	11		36	37	7
Sardinia		1			1				1					1		2	4	1
North	8	1,135	121	334	223	3,266	139	593	302	828	252	25	165	189	6	624	1,068	169
Center	1	295	57	535	99	905	56	229	171	222	113	3	100	108	6	248	359	86
South	10	773	147	257	292	1,867	85	541	282	733	220	14	200	202	38	629	806	220
Italy	*19*	*2,203*	*325*	*1126*	*614*	*6,038*	*280*	*1,363*	*755*	*1,783*	*585*	*42*	*465*	*499*	*50*	*1,501*	*2,233*	*475*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

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*

Table S/12 – Technical and biomedical equipment for diagnosis and treatment in non-accredited private healthcare facilities. Year 2017

Regions	HC	Echo	CT	HD	ACCA	MON	MRI	OT	RU	LV	PXU	LINAC	RCT	AIA	CGC	AM	SI	ADC
Piedmont	-	38	4	-	4	68	3	29	8	10	5	-	5	3	-	31	35	6
Lombardy	-	33	4	1	4	74	4	32	12	29	12	-	5	3	1	34	52	9
A.P. of Bolzano	-	10	3	-	1	45	4	11	11	7	4	-	2	1	-	11	13	2
A.P. of Trento	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veneto	-	2	-	-	-	5	-	2	1	2	2	-	1	-	-	2	3	1
Friuli V.G.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liguria	-	5	2	-	-	24	1	10	3	2	5	-	2	1	-	8	11	1
Emilia R.	-	16	2	-	3	40	2	10	5	18	4	-	3	2	-	16	30	1
Tuscany	-	25	3	1	1	31	2	10	3	8	3	1	2	1	-	13	22	2
Umbria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Marche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lazio	-	143	23	68	25	371	21	113	38	96	40	4	23	26	5	124	175	30
Abruzzo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Campania	-	8	1	-	1	13	-	6	1	5	1	-	1	2	-	6	11	1
Apulia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Basilicata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calabria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sicily	-	-	-	-	-	2	-	2	-	1	-	-	-	-	-	1	1	-
Sardinia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North	-	104	15	1	12	256	14	94	40	68	32	-	18	10	1	102	144	20
Center	-	168	26	69	26	402	23	123	41	104	43	5	25	27	5	137	197	32
South	-	8	1	-	1	15	-	8	1	6	1	-	1	2	-	7	12	1
Italy	-	*280*	*42*	*70*	*39*	*673*	*37*	*225*	*82*	*178*	*76*	*5*	*44*	*39*	*6*	*246*	*353*	*53*

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 2017 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 data 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 2017 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 almost 8.9 million patients were treated in 2017, of which 2.2 million (i.e. 25.2%) were from accredited hospitals. It should be recalled that, according to reports on SDO data, 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 2017 in terms of in-hospital days.

The number of in-hospital days for inpatient admissions breaks down to 37 million for public facilities and 14.1 million for the 'expanded private' facilities, whereas the volume of day hospital admissions is 3.8 million and 1.2 million, respectively.

The total data in Table S/20 also includes discharges (nearly 350,000) and in-hospital days (more than 1 million) related to DRG 391 (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 accredited hospitals relating to rehabilitation (75.6% inpatient admissions) and long-stay care (54% of in-hospital days) (see Tables S/21 and S/22).

2.3. Prevalent DRGs

The calculations on the Ministerial data for 2017 hospital discharge sheets allow us to quantify the activity of the entire hospital sector without disaggregations between the public and private components of the NHS (Table S/23), whereas for the data relating to AIOP area services, the data collecting resources of its regional offices and affiliated facilities make it possible to anticipate the 2018 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 hospitalization activity for acute patients receiving day hospital treatment in public and private healthcare facilities, 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 (2017) and, more specifically, in AIOP accredited hospitals (2018).

At the combined public-private level, the most common DRG is still childbirth with 281,026 discharges in 2017 (compared to 301,440 units in 2013) amounting to 4.5% of cases (as in 2013) (Table S/23).

On the other hand, in AIOP accredited hospitals even during 2018, first place was occupied by major joint replacements or reattachment of lower extremity (56,314 cases, accounting for 7.5% of the sector total).

For the comparison of complexity indicators (average weight and case-mix index) for public institutions and accredited hospitals, 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 diseases and disorders of the circulatory system stand out with 896,378 cases in 2017, compared to

966,194 cases recorded in 2013, and for diseases and disorders of the musculoskeletal system and connective tissue, with 807,381 cases in 2017 (compared to 832,369 in 2013), 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 (35.6 days), HIV infections (16.7 days), multiple significant trauma (14.1 days), burns (13.9 days), again as shown in Table S/31.

Day hospital activities for acute cases once again display diseases and disorders of the musculoskeletal system and connective tissue (233,102 cases) (Table S/32).

Rehabilitation activities for inpatient admissions were greatest among diseases and disorders of the musculoskeletal system and connective tissue (with 145,255 cases), followed by diseases and disorders of the nervous system (with 72,364 cases) and diseases and disorders of the circulatory system (with 45,801 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 diseases and disorders of the nervous system (11,320 cases), second place are diseases and disorders of the musculoskeletal system and connective tissue (6,093 cases), and finally the cases that fall within the MDC Factors influencing health status and use of health services (4,911 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 – we continue to suffer from a persistent lack of updating by the Ministry. However, the relative database should have a 2017 update available for the next edition of the report.

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 hospitals 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

As is usual, the theme of healthcare mobility closes out the section of the Report dedicated to activity data, analyzing it from the aspect more properly connected with the characteristics of the hospitalization demand expressed by citizens, based on their perception of the quality of care offered by the various Regional Health Services; this offers an alternative interpretation of the hospital production data set out in the previous sections. 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 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 2018, show the traditional inflow trend in regions such as Lombardy, constantly in the lead in this ranking with numbers exceeding 75,000 units for the acute-care sector alone, 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, Apulia, Liguria, Abruzzo, Sardinia, Lazio, and Marche.

Considering the mobility flow data for all regimes and types of hospitalization as a whole, there were more than 726,000 patients, who, in 2018, chose to go to other regional systems, with an active balance for Lombardy that in this case exceeds 100,000 units.

The phenomenon of mobility, as has often been pointed out, continues to be a sensitive topic in the debate on the reorganization of the regional hospital network performances, as is that of the freedom to choose the place for treatment. All of this increasingly motivates most 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 addressed this issue and intervened decisively to change the behavior of the most attractive Regions, cutting funding by 50% relative to the increases in

flows reported for the accredited sector in the two-year period 2014-2015, and 60% for those observed in 2016, safeguarding only highly-specialized services. On this delicate matter, also due to the economic balances of many of the privately-operated agencies of the NHS, the AIOP regional Presidents were once again this year requested to address the orientation of the citizens and to evaluate their effects on the incoming mobility flows.

Table S/13 – Patient beds, in-hospital days, and occupancy rate – Inpatient admissions

	2009			2010			2011			2012			2013		
	Patient beds	In-hospital days	O.R. %	Patient beds	In-hospital days	O.R. %	Patient beds	In-hospital days	O.R. %	Patient beds	In-hospital days	O.R. %	Patient beds	In-hospital days	O.R. %
Public Hospitals	172,718	50,836,854	80.6	168,926	50,114,576	81.3	166,544	48,492,926	79.8	161,653	47,155,798	79.9	156,762	45,685,829	79.8
Accredited Hospitals[1]	46,686	11,281,737	66.2	45622	10,945,990	65.7	44,487	10,688,865	65.8	42,970	10,422,856	66.5	42,142	10,202,409	66.3
Total	*219,404*	*62,118,591*		*214,548*	*61,060,566*		*211,031*	*59,181,791*		*204,623*	*57,578,654*		*198,904*	*55,888,238*	
	%	%		%	%		%	%		%	%		%	%	
Public Hospitals	78.7	81.8		78.7	82.1		78.9	81.9		79.0	81.9		78.8	81.7	
Accredited Hospitals[1]	21.3	18.2		21.3	17.9		21.1	18.1		21.0	18.1		21.2	18.3	
Total	*100.0*	*100.0*		*100.0*	*100.0*		*100.0*	*100.0*		*100.0*	*100.0*		*100.0*	*100.0*	

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
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/14 – Annual increase of activity, patient beds, and in-hospital days

	2010/2009		2011/2010		2012/2011		2013/2012		2013/2009	
	Patient beds	In-hospital days	Patient beds	In-hospital days	Patient beds	In-hospital days	Patient beds	In-hospital days	Patient beds	In-hospital days
– Public hospitals	-2.2	-1.4	-1.4	-3.2	-2.9	-2.8	-3.0	-3.1	-9.2	-10.1
– Accredited hospitals[1]	-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*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
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 hospitals – Activity data for inpatient admissions. Year 2013

Type of institution	2013					2012	
	Patient beds	Discharged pts	Days	Average length of stay	Occupancy rate %	Average length of stay	Occupancy rate %
– Total public and assimilated hospitals	156,762	5,879,708	45,685,829	7.8	79.8	7.8	79.9
– Accredited hospitals[1]	42,142	1,136,424	10,202,409	9.0	66.3	9.0	66.5
Total public and accredited institutions	*198,904*	*7,016,132*	*55,888,238*	*8.0*	*77.0*	*8.0*	*77.1*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health*

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

Regions	Patient beds actually used	Admissions	Days spent in hospital	2013			2011		
				Average length of stay	Occupancy rate (%)	Hospitalization rate (per 1,000 inhab.)	Average length of stay	Occupancy rate (%)	Hospitalization rate (per 1,000 inhab.)
– Piedmont	10,758	383,198	2,925,216	7.6	74.5	87.6	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	6.8	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	6.6	75.2	107.7	6.7	76.2	112.9
– Tuscany	9,251	384,296	2,506,923	6.5	74.2	104.1	6.6	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	77.7	96.6	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	89.6	131.5
– Campania	9,899	433,646	2,911,759	6.7	80.6	75.2	6.6	76.5	78.6
– Apulia	8,989	413,949	2,766,050	6.7	84.3	102.2	6.6	80.6	111.8
– Basilicata	1,422	55,805	385,415	6.9	74.3	96.9	6.9	70.3	100.7
– Calabria	3,126	135,084	921,315	6.8	80.7	69.0	6.8	76.1	80.6
– Sicily	9,697	405,120	2,811,350	6.9	79.4	81.0	6.8	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	79.9	102.9
South	41,518	1,767,325	12,077,847	6.8	79.7	85.7	6.8	78.1	92.6
Italy	*140,165*	*5,627,375*	*40,021,159*	*7.1*	*78.2*	*94.3*	*7.2*	*78.0*	*99.7*

(*) The following specialties are excluded: 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 S/17 – Activities of non-acute hospital stay (*) in public hospital facilities, by Region. Year 2013 and comparison with the year 2011

Regions	*Patient beds actually used*	*Admissions*	*Days spent in hospital*	*2013*		*2011*	
				Average length of stay	*Occupancy rate (%)*	*Average length of stay*	*Occupancy rate (%)*
– Piedmont	2,144	23,173	656,606	28.3	83.9	29.0	89.9
– Aosta Valley	25	157	3,895	24.8	42.7	-	-
– Lombardy	3,800	52,018	1,267,088	24.4	91.4	23.9	89.6
– 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	90.9
– Marche	494	7,411	138,688	18.7	76.9	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	60	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	76.6	28.4	69.0
Italy	*16,819*	*206,962*	*5,516,773*	*26.7*	*89.9*	*27.8*	*88.7*

(*) 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 S/18 – Activities of acute hospital-stay (*) in accredited hospitals[1], by Region. *Year 2013 and comparison with the year 2011*

Regions	*Patient beds actually used*	*Admissions*	*Days spent in hospital*	*2013*			*2011*		
				Average length of stay	*Occupancy rate (%)*	*Hospitalization rate (per 1,000 inhab.)*	*Average length of stay*	*Occupancy rate (%)*	*Hospitalization rate (per 1,000 inhab.)*
– Piedmont	940	36,410	142,188	3.9	41.4	8.3	4.8	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	68.6	2.9
– A.P. of Trento	104	2,808	18,671	6.6	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	6.0	28.3	5.0
– Liguria	60	1,724	9,370	5.4	42.8	1.1	6.1	57.2	0.9
– Emilia R.	2,619	89,847	507,984	5.7	53.1	20.5	6.0	55.1	21.8
– Tuscany	972	33,368	171,332	5.1	48.3	9.0	5.5	43.2	8.5
– Umbria	181	6,018	17,707	2.9	26.8	6.8	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	6.0	53.3	8.3
– Campania	4,305	177,900	1,002,651	5.6	63.8	30.8	5.7	66.7	34.7
– Apulia	1,591	80,092	364,028	4.5	62.7	19.8	4.6	62.7	20.9
– Basilicata	50	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	6.6	55.0	11.9
South	11,181	434,471	2,317,828	5.3	56.8	21.1	5.4	56.6	23.2
Italy	*24,554*	*932,066*	*4,987,920*	*5.4*	*55.7*	*15.6*	*5.6*	*56.5*	*16.6*

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

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

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

Source: *data from the Ministry of Health*

Table S/19 – Activities of non-acute hospital stay (*) in accredited hospitals[1], by Region. Year 2013 and comparison with the year 2011

Regions	*Patient beds actually used*	*Admissions*	*Days spent in hospital*	*2013*		*2011*	
				Average length of stay	*Occupancy rate (%)*	*Average length of stay*	*Occupancy rate (%)*
– 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	194,28	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	96.0	22.4	97.6
– 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	90.0	34.4	82.7
– Abruzzo	445	5,476	138,376	25.3	85.2	26.9	81.6
– Molise	60	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	99	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	799	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	86.9
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 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.

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

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

Source: *data from the Ministry of Health*

Table S/20 – Hospital Discharge Records (SDO): recorded activity, national grand total, and totals for public and private institutions – Discharged pts and in-hospital days. Year 2017

	Number of cases			*Number of days*		
	Public	*Private*	*Total*	*Public*	*Private*	*Total*
– Inpatient admissions for acute cases	4,769,507	1,485,548	6,255,055	35,151,881	8,190,161	43,342,042
– Day hospital for acute cases	1,300,597	519,939	1,820,536	3,709,430	937,819	4,647,249
– Rehabilitation for inpatient admissions	76,827	239,128	315,955	1,901,625	6,156,074	8,057,699
– Rehabilitation – Day hospital	12,005	18,445	30,450	144,744	311,972	456,716
– Long-term care	51,889	47,229	99,118	1,086,577	1,299,350	2,385,927
– Normal newborns(1)	277,451	72,183	349,634	840,995	217,448	1,058,443
Total	*6,488,276*	*2,382,472*	*8,870,748*	*42,835,252*	*17,112,824*	*59,948,076*

Public institutions: Hospital Centers, University Hospital Centers and Public Polyclinics, Public I.R.C.C.S. and Public Foundations, Directly Managed Hospitals.
Private institutions: Private Polyclinics, Private I.R.C.C.S. and Private Foundations, Classified Hospitals, USL Facilities, Research Facilities, Accredited Hospitals[2], and Non-accredited Private Healthcare Facilities.
The item "Long-stay care" includes discharged pts from inpatient admissions and day-hospital.
(1) Classified in the DRG 391.
(2) Code 5.1 institutes (Private accredited healthcare facilities) in the ministerial classification
Source: data from the Ministry of Health – SDO 2017

Table S/21 – Distribution of discharged pts classified according to type of institution, activity, and admissions(1). *Year 2017*

Type of institution	*Acute*				*Rehabilitation*					
	Inpatient admissions		*Day hospital*		*Inpatient admissions*		*Day hospital*		*Long-term care*	
	Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*
– Public institutions	4,769,507	76.3	1,300,597	71.4	76,827	24.3	12,005	39.4	51,889	52.4
– Accredited hospitals (as a whole)	1,421,266	22.7	511,206	28.1	238,947	75.6	18,445	60.6	46,817	47.2
– Non-accredited Private Healthcare Facilities	64,282	1.0	8,733	0.5	181	0.1	-	0.0	412	0.4
Total	*6,255,055*	*100.0*	*1,820,536*	*100.0*	*315,955*	*100.0*	*30,450*	*100.0*	*99,118*	*100.0*

(1) Data for normal newborns is not included.
Source: data from the Ministry of Health – SDO 2017

Table S/22 – Distribution of in-hospital days classified according to type of institution, activity, and admissions(1). *Year 2017*

Type of institution	*Acute*				*Rehabilitation*					
	Inpatient admissions		*Day hospital*		*Inpatient admissions*		*Day hospital*		*Long-term care*	
	Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*
– Public institutions	35,151,881	81.1	3,709,430	79.8	1,901,625	23.6	144,744	31.7	1,086,577	45.5
– Accredited hospitals (as a whole)	7,988,756	18.4	928,570	20.0	6,153,831	76.4	311,972	68.3	1,288,302	54.0
– Non-accredited Private Healthcare Facilities	201,405	0.5	9,249	0.2	2,243	0.0	-	0.0	11,048	0.5
Total	*43,342,042*	*100.0*	*4,647,249*	*100.0*	*8,057,699*	*100.0*	*456,716*	*100.0*	*2,385,927*	*100.0*

(1) Data for normal newborns is not included.
Source: data from the Ministry of Health – SDO 2017

Table S/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 2017

Rank	DRG		Discharges			% In-hospital days	Average length of stay
			Number	%	% cumul.		
1	373	Vaginal Delivery W/O Complicating Diagnoses	281,026	4.5	4.5	2.2	3.5
2	544	Major Joint Replacement or Reattachment of Lower Extremity	176,321	2.8	7.3	3.4	8.3
3	127	Heart Failure & Shock	176,254	2.8	10.1	3.8	9.2
4	087	Pulmonary Edema & Respiratory Failure	156,590	2.5	12.6	3.6	9.9
5	371	Cesarean Section W/O Cc	140,337	2.2	14.9	1.5	4.6
6	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	95,793	1.5	16.4	0.8	3.5
7	014	Intracranial Hemorrhage Or Cerebral Infarction	89,097	1.4	17.8	2.1	10.1
8	089	Simple Pneumonia & Pleurisy Age >17 W Cc	81,304	1.3	19.1	2.1	11.1
9	430	Psychoses	80,629	1.3	20.4	2.6	14.0
10	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	80,409	1.3	21.7	0.6	3.3
11	316	Renal failure	75,359	1.2	22.9	1.7	9.6
12	576	Septicemia W/O Mv 96+ Hours Age >17	71,754	1.1	24.1	2.1	12.9
13	311	Transurethral Procedures W/O Cc	69,013	1.1	25.2	0.5	3.3
14	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	64,827	1.0	26.2	0.5	3.3
15	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	61,234	1.0	27.2	1.0	7.4
16	470	Ungroupable (cases which could not be assigned to valid DRGs)	56,675	0.9	28.1	1.1	8.6
17	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	51,254	0.8	28.9	0.8	6.5
18	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	50,543	0.8	29.7	0.6	5.1
19	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	49,493	0.8	30.5	0.5	4.1
20	390	Neonate W Other Significant Problems	49,263	0.8	31.3	0.5	4.0
21	503	Knee Procedures W/O Pdx Of Infection	48,131	0.8	32.1	0.2	1.8
22	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	47,194	0.8	32.8	0.2	1.8
23	225	Foot Procedures	47,096	0.8	33.6	0.2	2.0
24	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	45,877	0.7	34.3	0.5	4.6
25	467	Other Factors Influencing Health Status	41,971	0.7	35.0	0.3	3.1
26	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	41,504	0.7	35.6	0.3	2.8
27	203	Malignancy Of Hepatobiliary System Or Pancreas	40,367	0.6	36.3	0.9	9.4
28	082	Respiratory Neoplasms	39,521	0.6	36.9	0.9	10.3
29	211	Hip & Femur Procedures Except Major Joint Age >17 W/O Cc	38,342	0.6	37.5	0.9	10.2
30	395	Red Blood Cell Disorders Age >17	38,271	0.6	38.1	0.7	8.4
31	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	36,185	0.6	38.7	0.4	5.0
32	158	Anal & Stomal Procedures W/O Cc	35,124	0.6	39.3	0.2	2.0

./.

(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) – Inpatient admissions for acute cases. Year 2017*

Rank		DRG	Discharges			% In-hospital days	Average length of stay
			Number	%	% cumul.		
33	149	Major Small & Large Bowel Procedures W/O Cc	33,963	0.5	39.8	0.8	9.7
34	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	33,676	0.5	40.4	0.3	3.3
35	524	Transient Ischemia	33,461	0.5	40.9	0.5	6.8
36	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	33,454	0.5	41.4	0.2	2.0
37	088	Chronic Obstructive Pulmonary Disease	33,304	0.5	42.0	0.7	8.6
38	124	Circulatory Disorders Except Ami, W Card Cath & Complex Diag	32,745	0.5	42.5	0.5	7.0
39	290	Thyroid Procedures	32,668	0.5	43.0	0.2	3.0
40	337	Transurethral Prostatectomy W/O Cc	32,574	0.5	43.5	0.3	4.3
41	090	Simple Pneumonia & Pleurisy Age >17 W/O Cc	32,228	0.5	44.0	0.6	8.6
42	210	Hip & Femur Procedures Except Major Joint Age >17 W Cc	31,090	0.5	44.5	0.9	13.0
43	381	Abortion W D&C, Aspiration Curettage Or Hysterotomy	30,705	0.5	45.0	0.1	1.7
44	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	30,679	0.5	45.5	0.3	4.0
45	260	Subtotal Mastectomy For Malignancy W/O Cc	29,990	0.5	46.0	0.2	2.2
46	012	Degenerative Nervous System Disorders	29,813	0.5	46.5	0.6	8.5
47	208	Disorders Of The Biliary Tract W/O Cc	29,710	0.5	46.9	0.4	6.5
48	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	29,332	0.5	47.4	0.3	3.8
49	184	Esophagitis, Gastroent & Misc Digest Disorders Age < 18	26,957	0.4	47.8	0.2	3.3
50	379	Threatened Abortion	26,894	0.4	48.3	0.3	4.7
51	202	Cirrhosis & Alcoholic Hepatitis	26,138	0.4	48.7	0.6	10.1
52	174	G.I. Hemorrhage w CC	25,884	0.4	49.1	0.5	9.1
53	389	Full Term Neonate W Major Problems	25,756	0.4	49.5	0.4	6.9
54	479	Other Vascular Procedures W/O Cc	25,447	0.4	49.9	0.3	4.8
55	204	Disorders Of Pancreas Except Malignancy	25,099	0.4	50.3	0.5	9.1
56	207	Disorders Of The Biliary Tract W Cc	25,070	0.4	50.7	0.6	10.2
57	298	Nutritional & Misc Metabolic Disorders Age 0-17	24,798	0.4	51.1	0.2	3.7
58	098	Bronchitis & Asthma Age 0-17	24,292	0.4	51.5	0.3	4.5
59	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	24,254	0.4	51.9	0.1	2.6
60	227	Soft Tissue Procedures W/O Cc	24,091	0.4	52.3	0.1	2.6
		Total (top 60 DRGs)	*3,270,830*	*52.3*		*48.6*	
		Grand Total	*6,256,025*	*100.0*		*100.0*	*6.9*

Source: *data from the Ministry of Health – SDO 2017*

Table S/24 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases. Year 2018

Rank	DRG		Discharges			% in-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
1	544	Major Joint Replacement or Reattachment of Lower Extremity	56,314	7.5	7.5	7.4	6.2	350,176
2	048	Other Disorders Of The Eye Age <18	19,515	2.6	10.2	2.0	4.8	94,333
3	468	Extensive O.R. Procedure Unrelated to Principal Diagnosis	19,115	2.6	12.7	2.6	6.4	122,718
4	225	Foot Procedures	17,694	2.4	15.1	0.5	1.4	23,937
5	503	Knee Procedures W/O Pdx Of Infection	16,554	2.2	17.3	0.5	1.5	24,036
6	373	Vaginal Delivery W/O Complicating Diagnoses	15,730	2.1	19.4	1.1	3.5	54,349
7	127	Heart Failure & Shock	15,315	2.1	21.5	2.8	8.7	133,844
8	371	Cesarean Section W/O Cc	13,496	1.8	23.3	1.1	4.0	54,462
9	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	12,989	1.7	25.0	0.8	2.9	37,553
10	288	O.R. Procedures For Obesity	10,994	1.5	26.5	0.8	3.6	39,126
11	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	10,316	1.4	27.9	0.5	2.4	25,211
12	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	9,921	1.3	29.2	0.6	2.7	26,682
13	245	Bone Diseases & Specific Arthropathies W/O Cc	9,669	1.3	30.5	1.2	6.1	58,977
14	477	Non-extensive O.R. Proc Unrelated To Principal Diagnosis	9,650	1.3	31.8	1.1	5.4	51,646
15	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	9,130	1.2	33.0	0.4	1.9	16,930
16	311	Transurethral Procedures W/O Cc	9,018	1.2	34.2	0.5	2.7	23,951
17	430	Psychoses	8,959	1.2	35.4	5.4	28.6	256,404
18	498	Spinal Fusion Except Cervical W/O Cc	8,029	1.1	36.5	0.7	4.3	34,534
19	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	7,484	1.0	37.5	0.2	1.4	10,818
20	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	7,268	1.0	38.5	0.4	2.6	18,765
21	087	Pulmonary Edema & Respiratory Failure	6,835	0.9	39.4	1.3	9.3	63,683
22	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	6,719	0.9	40.3	0.4	3.1	20,903
23	408	Myeloprolif Disord Or Poor Diff Neopl W/Other O.R. Proc	6,691	0.9	41.2	11.9	84.5	565,157
24	158	Anal & Stomal Procedures W/O Cc	6,269	0.8	42.0	0.2	1.6	10,304
25	337	Transurethral Prostatectomy W/O Cc	6,234	0.8	42.9	0.5	3.5	22,048
26	243	Medical Back Problems	6,129	0.8	43.7	0.6	5.0	30,787
27	012	Degenerative Nervous System Disorders	5,711	0.8	44.4	1.1	9.2	52,444
28	467	Other Factors Influencing Health Status	5,487	0.7	45.2	0.6	5.6	30,873
29	461	O.R. Proc W Diagnoses of Other Contact W Health Services	5,419	0.7	45.9	0.6	5.6	30,194
30	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	5,198	0.7	46.6	0.3	3.2	16,576
31	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	5,040	0.7	47.3	0.2	1.5	7,330
32	479	Other Vascular Procedures W/O Cc	4,909	0.7	47.9	0.3	3.1	15,001

./.

(Continued) *Table S/24 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases. Year 2018*

Rank		DRG	Discharges			% in-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
33	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	4,901	0.7	48.6	0.3	3.2	15,868
34	104	Cardiac Valve & Oth Major Cardiothoracic Proc W Card Cath	4,797	0.6	49.2	1.2	11.9	57,313
35	120	Other Circulatory System O.R. Procedures	4,616	0.6	49.9	0.5	4.9	22,468
36	232	Arthroscopy	4,536	0.6	50.5	0.1	1.2	5,240
37	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	4,511	0.6	51.1	0.2	2.5	11,298
38	089	Simple Pneumonia & Pleurisy Age >17 W Cc	4,456	0.6	51.7	1.0	11.2	49,858
39	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	4,275	0.6	52.2	0.4	4.5	19,163
40	190	Other Digestive System Diagnoses Age <18	4,257	0.6	52.8	0.6	6.6	28,281
41	227	Soft Tissue Procedures W/O Cc	4,183	0.6	53.4	0.2	1.7	7,195
42	316	Renal failure	3,994	0.5	53.9	0.7	8.2	32,608
43	248	Tendonitis, Myositis & Bursitis	3,926	0.5	54.4	0.3	4.0	15,644
44	256	Other Musculoskeletal System & Connective Tissue Diagnoses	3,881	0.5	54.9	0.2	2.7	10,439
45	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	3,745	0.5	55.4	0.4	5.3	19,758
46	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	3,690	0.5	55.9	0.3	4.5	16,440
47	014	Intracranial Hemorrhage Or Cerebral Infarction	3,641	0.5	56.4	0.7	9.1	33,295
48	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	3,634	0.5	56.9	0.3	4.0	14,644
49	335	Major Male Pelvic Procedures W/O Cc	3,566	0.5	57.4	0.4	5.8	20,626
50	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	3,446	0.5	57.9	0.3	4.3	14,673
51	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	3,427	0.5	58.3	0.8	11.2	38,402
52	545	Revision Of Hip Or Knee Replacement	3,387	0.5	58.8	0.6	8.0	27,093
53	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	3,386	0.5	59.2	0.1	2.0	6,933
54	088	Chronic Obstructive Pulmonary Disease	3,198	0.4	59.6	0.6	8.5	27,060
55	189	Other Digestive System Diagnoses Age >17 W/O Cc	3,183	0.4	60.1	0.2	2.9	9,383
56	136	Cardiac Congenital & Valvular Disorders Age >17 W/O Cc	3,148	0.4	60.5	0.5	7.2	22,769
57	208	Disorders Of The Biliary Tract W/O Cc	3,104	0.4	60.9	0.3	4.8	14,875
58	133	Atherosclerosis W/O Cc	3,097	0.4	61.3	0.3	4.5	14,061
59	019	Cranial & Peripheral Nerve Disorders W/O Cc	3,058	0.4	61.7	0.2	3.9	11,815
60	131	Peripheral Vascular Disorders W/O Cc	2,998	0.4	62.1	0.3	5.1	15,197
		Total (top 60 DRGs)	*463,842*	*62.1*			*6.3*	*2,906,151*
		Grand Total	*746,461*				*6.4*	*4,760,496*

Source: *processing by Ermeneia – data from AIOP*

Table S/25 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admission for acute cases in the North of Italy. Year 2018

Rank	DRG		Discharges			% In-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
1	544	Major Joint Replacement or Reattachment of Lower Extremity	31,273	11.2	11.2	11.9	5.8	180,416
2	225	Foot Procedures	7,336	2.6	13.9	0.6	1.2	8,877
3	288	O.R. Procedures For Obesity	6,712	2.4	16.3	1.5	3.3	22,475
4	503	Knee Procedures W/O Pdx Of Infection	6,427	2.3	18.6	0.7	1.6	10,030
5	311	Transurethral Procedures W/O Cc	5,427	2.0	20.6	0.8	2.3	12,397
6	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	5,310	1.9	22.5	0.8	2.3	11,970
7	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	5,244	1.9	24.4	0.9	2.6	13,516
8	127	Heart Failure & Shock	4,361	1.6	25.9	2.9	10.2	44,554
9	232	Arthroscopy	4,058	1.5	27.4	0.3	1.1	4,566
10	373	Vaginal Delivery W/O Complicating Diagnoses	3,951	1.4	28.8	0.9	3.3	13,142
11	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	3,820	1.4	30.2	0.6	2.5	9,591
12	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	3,637	1.3	31.5	0.6	2.4	8,853
13	337	Transurethral Prostatectomy W/O Cc	3,548	1.3	32.8	0.7	3.1	11,149
14	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	3,429	1.2	34.0	0.3	1.2	4,213
15	104	Cardiac Valve & Oth Major Cardiothoracic Proc W Card Cath	3,290	1.2	35.2	2.6	11.9	39,230
16	498	Spinal Fusion Except Cervical W/O Cc	3,232	1.2	36.3	1.0	4.5	14,512
17	479	Other Vascular Procedures W/O Cc	3,126	1.1	37.5	0.7	3.2	9,978
18	224	Shoulder, Elbow or Forearm Proc, Exc Major Joint Proc, W/O Cc	3,014	1.1	38.5	0.3	1.6	4,943
19	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	2,938	1.1	39.6	0.6	3.4	9,879
20	158	Anal & Stomal Procedures W/O Cc	2,929	1.1	40.7	0.3	1.3	3,903
21	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	2,561	0.9	41.6	0.5	2.8	7,244
22	227	Soft Tissue Procedures W/O Cc	2,186	0.8	42.4	0.2	1.5	3,252
23	012	Degenerative Nervous System Disorders	2,165	0.8	43.1	1.1	7.7	16,743
24	014	Intracranial Hemorrhage Or Cerebral Infarction	1,961	0.7	43.9	1.2	9.2	18,038
25	087	Pulmonary Edema & Respiratory Failure	1,941	0.7	44.5	1.4	10.6	20,629
26	545	Revision Of Hip Or Knee Replacement	1,916	0.7	45.2	0.9	7.3	13,946
27	219	Lower Extrem & Humer Proc Except Hip, Foot, Femur Age >17 W/O Cc	1,871	0.7	45.9	0.5	4.1	7,709
28	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	1,836	0.7	46.6	0.5	4.2	7,755
29	430	Psychoses	1,834	0.7	47.2	2.5	21.0	38,481
30	467	Other Factors Influencing Health Status	1,819	0.7	47.9	0.7	6.1	11,045
31	089	Simple Pneumonia & Pleurisy Age >17 W Cc	1,804	0.6	48.5	1.5	13.0	23,432
32	335	Major Male Pelvic Procedures W/O Cc	1,751	0.6	49.2	0.7	6.5	11,377

(Continued) *Table S/25 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admission for acute cases in the North of Italy. Year 2018*

Rank		DRG	Discharges			% In-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
33	365	Other Female Reproductive System O.R. Procedures	1,695	0.6	49.8	0.0	0.4	723
34	371	Cesarean Section W/O Cc	1,686	0.6	50.4	0.5	4.5	7,602
35	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	1,663	0.6	51.0	0.5	4.1	6,845
36	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	1,582	0.6	51.5	0.2	2.3	3,608
37	461	O.R. Proc W Diagnoses of Other Contact W Health Services	1,526	0.5	52.1	0.3	2.9	4,455
38	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	1,498	0.5	52.6	0.1	1.3	2,021
39	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	1,490	0.5	53.2	0.2	1.7	2,495
40	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	1,472	0.5	53.7	0.3	2.9	4,247
41	557	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W Major Cv Dx	1,431	0.5	54.2	0.7	7.9	11,299
42	163	Hernia Procedures, Age < 18	1,425	0.5	54.7	0.1	1.3	1,826
43	149	Major Small & Large Bowel Procedures W/O Cc	1,311	0.5	55.2	0.7	8.1	10,651
44	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	1,296	0.5	55.7	0.4	4.3	5,606
45	266	Skin Graft &/Or Debrid Except For Skin Ulcer Or Cellulitis W/O Cc	1,247	0.4	56.1	0.1	1.2	1,460
46	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	1,239	0.4	56.6	0.1	1.2	1,532
47	211	Hip & Femur Procedures Except Major Joint Age >17 W/O Cc	1,198	0.4	57.0	0.6	7.4	8,874
48	042	Intraocular Procedures Except Retina, Iris & Lens	1,170	0.4	57.4	0.1	1.6	1,844
49	534	Extracranial Procedures W/O Cc	1,148	0.4	57.8	0.3	3.9	4,486
50	117	Cardiac Pacemaker Revision Except Device Replacement	1,137	0.4	58.2	0.2	2.1	2,442
51	008	Periph & Cranial Nerve & Other Nerv Syst Proc W/O Cc	1,131	0.4	58.6	0.1	1.8	2,032
52	395	Red Blood Cell Disorders Age >17	1,109	0.4	59.0	0.7	9.0	9,985
53	477	Non-extensive O.R. Proc Unrelated To Principal Diagnosis	1,104	0.4	59.4	0.2	2.9	3,179
54	576	Septicemia W/O Mv 96+ Hours Age >17	1,091	0.4	59.8	1.2	16.5	17,995
55	105	Cardiac Valve & Oth Major Cardiothoracic Proc W/O Card Cath	1,088	0.4	60.2	1.1	14.8	16,076
56	090	Simple Pneumonia & Pleurisy Age >17 W/O Cc	1,062	0.4	60.6	0.7	9.4	9,940
57	428	Disorders Of Personality & Impulse Control	1,053	0.4	61.0	2.8	39.8	41,948
58	515	Cardiac defibrillator implant w/o cardiac cath	1,049	0.4	61.4	0.4	5.1	5,386
59	111	Major cardiovascular procedures w/o cc	1,046	0.4	61.7	0.5	6.9	7,204
60	053	Sinus & Mastoid Procedures Age >17	1,035	0.4	62.1	0.1	1.6	1,648
		Total (top 60 DRGs)	*172,689*	*62.1*			*4.7*	*815,254*
		Grand Total (North)	*278,070*				*5.5*	*1,521,103*

Source: *processing by Ermeneia – data from AIOP*

Table S/26 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the Center of Italy. Year 2018

Rank	DRG		Discharges			% In-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
1	544	Major Joint Replacement or Reattachment of Lower Extremity	13,382	11.3	11.3	13.0	7.0	93,147
2	225	Foot Procedures	8,230	7.0	18.3	1.6	1.4	11,555
3	503	Knee Procedures W/O Pdx Of Infection	6,659	5.6	24.0	1.2	1.2	8,321
4	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	4,298	3.6	27.6	1.0	1.6	6,839
5	430	Psychoses	4,032	3.4	31.0	14.5	25.8	103,880
6	127	Heart Failure & Shock	2,468	2.1	33.1	3.2	9.3	23,043
7	243	Medical Back Problems	2,244	1.9	35.0	1.9	5.9	13,294
8	245	Bone Diseases & Specific Arthropathies W/O Cc	2,104	1.8	36.8	2.3	7.9	16,546
9	498	Spinal Fusion Except Cervical W/O Cc	2,078	1.8	38.6	1.2	4.0	8,406
10	288	O.R. Procedures For Obesity	1,657	1.4	40.0	0.9	4.0	6,702
11	523	Alc/Drug Abuse Or Depend W/O Rehabilitation Therapy W/O Cc	1,621	1.4	41.4	4.2	18.4	29,807
12	158	Anal & Stomal Procedures W/O Cc	1,535	1.3	42.7	0.3	1.4	2,085
13	136	Cardiac Congenital & Valvular Disorders Age >17 W/O Cc	1,463	1.2	43.9	2.1	10.5	15,316
14	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	1,458	1.2	45.1	0.3	1.3	1,915
15	428	Disorders Of Personality & Impulse Control	1,437	1.2	46.4	5.1	25.1	36,097
16	133	Atherosclerosis W/O Cc	1,421	1.2	47.6	1.0	5.2	7,387
17	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	1,381	1.2	48.7	0.7	3.4	4,644
18	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	1,305	1.1	49.8	0.3	1.8	2,380
19	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	1,303	1.1	50.9	0.2	1.0	1,331
20	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	1,287	1.1	52.0	0.6	3.1	4,001
21	087	Pulmonary Edema & Respiratory Failure	1,237	1.0	53.1	1.9	11.2	13,839
22	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	1,193	1.0	54.1	0.3	1.6	1,964
23	254	Fx, sprn, strn & Disl Up arm, low leg Ex Foot Age >17 W/O CC	1,179	1.0	55.1	0.3	1.7	2,005
24	470	Ungroupable (cases which could not be assigned to valid DRGs)	1,085	0.9	56.0	0.7	4.6	5,001
25	089	Simple Pneumonia & Pleurisy Age >17 W Cc	1,062	0.9	56.9	1.4	9.7	10,251
26	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	1,056	0.9	57.8	0.2	1.2	1,275
27	491	Major Joint & Limb Reattachment Procedures Of Upper Extremity	1,052	0.9	58.7	0.6	4.2	4,374
28	131	Peripheral Vascular Disorders W/O Cc	1,044	0.9	59.6	0.9	6.4	6,670
29	227	Soft Tissue Procedures W/O Cc	1,003	0.9	60.4	0.2	1.7	1,751
30	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	943	0.8	61.2	0.3	2.3	2,134
31	248	Tendonitis, Myositis & Bursitis	921	0.8	62.0	0.3	2.5	2,328
32	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	910	0.8	62.8	0.7	5.3	4,813

./.

(Continued) *Table S/26 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the Center of Italy. Year 2018*

Rank		DRG	Discharges			% In-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
33	256	Other Musculoskeletal System & Connective Tissue Diagnoses	909	0.8	63.6	0.2	1.9	1,744
34	189	Other Digestive System Diagnoses Age >17 W/O Cc	875	0.7	64.3	0.2	1.8	1,593
35	088	Chronic Obstructive Pulmonary Disease	873	0.7	65.0	1.1	8.9	7,788
36	311	Transurethral Procedures W/O Cc	871	0.7	65.8	0.3	2.5	2,175
37	467	Other Factors Influencing Health Status	835	0.7	66.5	0.1	1.0	845
38	545	Revision Of Hip Or Knee Replacement	778	0.7	67.1	1.0	9.4	7,337
39	316	Renal failure	772	0.7	67.8	1.0	8.9	6,888
40	337	Transurethral Prostatectomy W/O Cc	718	0.6	68.4	0.3	2.9	2,090
41	073	Other Ear, Nose, Mouth & Throat Diagnoses Age >17	701	0.6	69.0	0.3	3.1	2,149
42	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	686	0.6	69.6	0.3	2.8	1,937
43	090	Simple Pneumonia & Pleurisy Age >17 W/O Cc	635	0.5	70.1	0.9	9.6	6,108
44	042	Intraocular Procedures Except Retina, Iris & Lens	610	0.5	70.6	0.2	2.9	1,752
45	056	Rhinoplasty	608	0.5	71.2	0.1	1.7	1,059
46	011	Nervous System Neoplasms W/O CC	599	0.5	71.7	0.3	3.6	2,141
47	249	Aftercare, Musculoskeletal System & Connective Tissue	580	0.5	72.2	0.6	7.0	4,067
48	053	Sinus & Mastoid Procedures Age >17	568	0.5	72.6	0.1	1.6	923
49	294	Diabetes Age >35	545	0.5	73.1	0.8	9.9	5,396
50	119	Vein Ligation & Stripping	527	0.4	73.5	0.1	1.0	533
51	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	488	0.4	74.0	0.4	6.0	2,933
52	008	Periph & Cranial Nerve & Other Nerv Syst Proc W/O Cc	477	0.4	74.4	0.1	1.5	705
53	524	Transient Ischemia	446	0.4	74.7	0.5	8.3	3,721
54	320	Kidney & Urinary Tract Infections Age >17 W Cc	444	0.4	75.1	0.5	8.7	3,842
55	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	434	0.4	75.5	0.1	1.0	420
56	185	Dental & Oral Dis Exc Extract & Restorations, Age >17	428	0.4	75.8	0.1	2.0	876
57	012	Degenerative Nervous System Disorders	427	0.4	76.2	0.6	10.3	4,387
58	219	Lower Extrem & Humerus Proc Except Hip, Foot, Femur Age >17 W/O Cc	422	0.4	76.6	0.1	1.8	747
59	160	Hernia Procedures Except Inguinal & Femoral Age >17 W/O Cc	406	0.3	76.9	0.1	1.9	757
60	296	Nutritional & Misc Metabolic Disorders Age >17 W Cc	404	0.3	77.3	0.5	8.9	3,602
		Total (top 60 DRGs)	*91,114*	*77.3*			*5.8*	*531,616*
		Grand Total (Center)	*117,937*				*6.1*	*714,052*

Source: *processing by Ermeneia – data from AIOP*

Table S/27 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the South of Italy. Year 2018

Rank		DRG	Discharges			% in-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
1	048	Other Disorders Of The Eye Age <18	19,447	5.5	5.5	3.7	4.8	94,084
2	468	Extensive O.R. Procedure Unrelated to Principal Diagnosis	18,791	5.4	10.9	4.8	6.4	120,279
3	371	Cesarean Section W/O Cc	11,810	3.4	14.3	1.9	4.0	46,860
4	373	Vaginal Delivery W/O Complicating Diagnoses	11,779	3.4	17.6	1.6	3.5	41,207
5	544	Major Joint Replacement or Reattachment of Lower Extremity	10,331	2.9	20.6	2.7	6.7	69,018
6	477	Non-extensive O.R. Proc Unrelated To Principal Diagnosis	8,481	2.4	23.0	1.9	5.7	48,268
7	127	Heart Failure & Shock	8,323	2.4	25.4	2.6	7.8	64,784
8	245	Bone Diseases & Specific Arthropathies W/O Cc	7,434	2.1	27.5	1.6	5.6	41,580
9	125	Circulatory Disorders Except Ami, W Card Cath W/O Complex Diag	6,496	1.9	29.4	0.6	2.4	15,620
10	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	6,055	1.7	31.1	0.8	3.4	20,433
11	408	Myeloprolif Disord Or Poor Diff Neopl W/Other O.R. Proc	6,011	1.7	32.8	22.3	93.8	563,773
12	494	Laparoscopic Cholecystectomy W/O C.D.E. W/O Cc	5,155	1.5	34.3	0.6	3.0	15,334
13	190	Other Digestive System Diagnoses Age <18	4,102	1.2	35.4	1.1	6.7	27,498
14	558	Percutaneous Cardiovascular Proc W Drug-Eluting Stent W/O Maj Cv Dx	3,781	1.1	36.5	0.4	2.9	11,024
15	120	Other Circulatory System O.R. Procedures	3,726	1.1	37.6	0.7	4.6	17,260
16	087	Pulmonary Edema & Respiratory Failure	3,640	1.0	38.6	1.2	8.0	29,111
17	461	O.R. Proc W Diagnoses of Other Contact W Health Services	3,528	1.0	39.6	1.0	7.0	24,558
18	243	Medical Back Problems	3,087	0.9	40.5	0.5	3.8	11,649
19	012	Degenerative Nervous System Disorders	3,027	0.9	41.4	1.2	10.0	30,209
20	430	Psychoses	2,839	0.8	42.2	4.4	39.4	111,819
21	467	Other Factors Influencing Health Status	2,687	0.8	43.0	0.7	6.9	18,644
22	248	Tendonitis, Myositis & Bursitis	2,618	0.7	43.7	0.3	3.1	8,231
23	288	O.R. Procedures For Obesity	2,618	0.7	44.4	0.4	3.8	9,924
24	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	2,543	0.7	45.2	1.3	13.3	33,809
25	311	Transurethral Procedures W/O Cc	2,442	0.7	45.9	0.3	3.5	8,618
26	256	Other Musculoskeletal System & Connective Tissue Diagnoses	2,428	0.7	46.6	0.3	3.0	7,163
27	223	Major Shoulder/Elbow Proc, Or Other Upper Extremity Proc W Cc	2,417	0.7	47.3	0.2	1.9	4,508
28	316	Renal failure	2,379	0.7	47.9	0.7	6.9	16,422
29	047	Other Disorders Of The Eye Age >17 W/O CC	2,351	0.7	48.6	0.0	0.1	310
30	503	Knee Procedures W/O Pdx Of Infection	2,288	0.7	49.3	0.2	2.0	4,470
31	019	Cranial & Peripheral Nerve Disorders W/O Cc	2,284	0.7	49.9	0.3	3.7	8,401
32	017	Nonspecific Cerebrovascular Disorders W/O Cc	2,251	0.6	50.5	1.4	15.8	35,590

./.

(Continued) *Table S/27 – AIOP accredited hospitals: top 60 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for acute cases in the South of Italy. Year 2018*

Rank		DRG	Discharges			% in-hospital days	Average lenght of stay	In-hospital days
			Number	%	% cumul.			
33	498	Spinal Fusion Except Cervical W/O Cc	2,201	0.6	51.2	0.4	4.3	9,467
34	183	Esophagitis, Gastroent & Misc Digest Disorders Age >17 W/O Cc	2,184	0.6	51.8	0.4	4.9	10,664
35	208	Disorders Of The Biliary Tract W/O Cc	2,054	0.6	52.4	0.3	4.0	8,308
36	189	Other Digestive System Diagnoses Age >17 W/O Cc	2,044	0.6	53.0	0.3	3.2	6,567
37	518	Perc Cardio Proc W/O Coronary Artery Stent Or Ami	2,024	0.6	53.5	0.2	2.6	5,249
38	324	Urinary Stones W/O Cc	2,019	0.6	54.1	0.8	10.2	20,610
39	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	2,000	0.6	54.7	0.3	3.3	6,596
40	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	1,958	0.6	55.3	0.3	4.0	7,871
41	500	Back & Neck Procedures Except Spinal Fusion W/O Cc	1,931	0.6	55.8	0.3	3.8	7,325
42	255	Fx, Sprn, Strn & Disl Of Uparm, lowleg Ex Foot Age <18	1,899	0.5	56.3	0.3	4.3	8,086
43	369	Menstrual & Other Female Reproductive System Disorders	1,872	0.5	56.9	0.3	4.2	7,940
44	224	Shoulder, Elbow Or Forearm Proc, Except Major Joint Proc, W/O Cc	1,808	0.5	57.4	0.2	2.8	5,136
45	552	Other Permanent Cardiac Pacemaker Implant W/O Major Cv Dx	1,797	0.5	57.9	0.3	3.8	6,887
46	016	Nonspecific Cerebrovascular Disorders W Cc	1,786	0.5	58.4	0.6	9.0	16,106
47	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	1,768	0.5	58.9	0.1	1.9	3,430
48	301	Endocrine Disorders W/O Cc	1,767	0.5	59.4	0.2	2.7	4,747
49	349	Benign Prostatic Hypertrophy W/O CC	1,758	0.5	59.9	0.3	3.8	6,766
50	337	Transurethral Prostatectomy W/O Cc	1,744	0.5	60.4	0.3	4.4	7,744
51	479	Other Vascular Procedures W/O Cc	1,729	0.5	60.9	0.2	2.8	4,919
52	234	Other Musculoskelet Sys & Conn Tiss O.R. Proc W/O Cc	1,709	0.5	61.4	0.3	3.8	6,413
53	524	Transient Ischemia	1,704	0.5	61.9	0.4	6.1	10,438
54	284	Minor Skin Disorders W/O CC	1,618	0.5	62.4	0.3	4.9	7,979
55	145	Other Circulatory System Diagnoses W/O Cc	1,609	0.5	62.8	0.3	4.3	6,966
56	082	Respiratory Neoplasms	1,575	0.4	63.3	0.4	6.5	10,194
57	319	Kidney & Urinary Tract Neoplasms W/O CC	1,560	0.4	63.7	0.2	3.9	6,046
58	133	Atherosclerosis W/O Cc	1,548	0.4	64.1	0.2	3.7	5,721
59	225	Foot Procedures	1,543	0.4	64.6	0.1	1.9	2,914
60	089	Simple Pneumonia & Pleurisy Age >17 W Cc	1,530	0.4	65.0	0.6	10.1	15,514
		Total (top 60 DRGs)	*227,888*	*65.0*			*7.8*	*1,787,061*
		Grand Total (South)	*350,454*				*7.2*	*2,525,341*

Source: *processing by Ermeneia – data from AIOP*

Table S/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. Year 2017

Rank		DRG	Discharges			% Accesses	Average number of accesses
			Number	%	% cumul.		
1	410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	100,200	5.5	5.5	20.5	9.5
2	359	Uterine & Adnexa Proc For Non-Malignancy W/O Cc	86,109	4.7	10.2	2.4	1.3
3	381	Abortion W D&C, Aspiration Curettage Or Hysterotomy	80,944	4.4	14.7	2.3	1.3
4	162	Inguinal & Femoral Hernia Procedures Age >17 W/O Cc	65,636	3.6	18.3	2.0	1.4
5	266	Skin Graft &/Or Debrid Except For Skin Ulcer Or Cellulitis W/O Cc	50,231	2.8	21.0	1.7	1.6
6	467	Other Factors Influencing Health Status	45,863	2.5	23.6	2.0	2.0
7	503	Knee Procedures W/O Pdx Of Infection	38,770	2.1	25.7	1.2	1.4
8	039	Lens Procedures With Or Without Vitrectomy	34,926	1.9	27.6	1.4	1.9
9	364	D&C, Conization Except For Malignancy	34,727	1.9	29.5	1.1	1.5
10	225	Foot Procedures	32,529	1.8	31.3	1.0	1.4
11	538	Local Excis & Remov of Int Fix Dev Except Hip & Femur W/O Cc	29,875	1.6	32.9	0.8	1.3
12	229	Hand Or Wrist Proc, Except Major Joint Proc, W/O Cc	29,582	1.6	34.6	0.9	1.4
13	055	Miscellaneous Ear, Nose, Mouth & Throat Procedures	29,463	1.6	36.2	0.9	1.5
14	270	Other Skin, Subcut Tiss & Breast Proc W/O Cc	26,568	1.5	37.6	0.8	1.4
15	042	Intraocular Procedures Except Retina, Iris & Lens	26,478	1.5	39.1	0.9	1.6
16	119	Vein Ligation & Stripping	26,091	1.4	40.5	0.8	1.4
17	158	Anal & Stomal Procedures W/O Cc	22,389	1.2	41.8	0.8	1.6
18	169	Mouth Procedures W/O Cc	21,413	1.2	42.9	0.7	1.5
19	036	Retinal procedures	21,374	1.2	44.1	0.8	1.8
20	395	Red Blood Cell Disorders Age >17	20,694	1.1	45.2	3.5	7.9
21	466	Aftercare W/O History Of Malignancy As Secondary Diagnosis	19,115	1.0	46.3	1.0	2.4
22	301	Endocrine Disorders W/O Cc	17,874	1.0	47.3	0.8	2.0
23	139	Cardiac Arrhythmia & Conduction Disorders W/O Cc	17,491	1.0	48.2	0.5	1.4
24	380	Abortion W/O D&C	16,090	0.9	49.1	0.8	2.2
25	227	Soft Tissue Procedures W/O Cc	15,855	0.9	50.0	0.5	1.4
26	339	Testes Procedures, Non-Malignancy Age >17	15,678	0.9	50.9	0.5	1.4
27	365	Other Female Reproductive System O.R. Procedures	15,309	0.8	51.7	0.3	1.0
28	267	Perianal & Pilonidal Procedures	15,295	0.8	52.5	0.6	1.7
29	404	Lymphoma & Non-Acute Leukemia W/O Cc	14,484	0.8	53.3	1.6	5.3
30	040	Extraocular Procedures Except Orbit Age >17	14,440	0.8	54.1	0.5	1.5
		Total (top 30 DRGs)	*985,493*	*54.1*		*53.6*	
		Grand Total	*1,951,876*	*100.0*		*100.0*	*2.7*

Source: *data from the Ministry of Health – SDO 2017*

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 2017

Rank		DRG	Discharges			% In-hospital days	Average length of stay
			Number	%	% cumul.		
1	256	Other Musculoskeletal System & Connective Tissue Diagnoses	82,588	26.1	26.1	17.8	17.4
2	012	Degenerative Nervous System Disorders	36,462	11.5	37.7	18.2	40.2
3	249	Aftercare, Musculoskeletal System & Connective Tissue	26,059	8.2	45.9	8.4	26.0
4	145	Other Circulatory System Diagnoses W/O Cc	18,572	5.9	51.8	3.9	16.9
5	144	Other Circulatory System Diagnoses W Cc	14,471	4.6	56.4	3.5	19.3
6	462	Rehabilitation	12,001	3.8	60.2	3.4	22.8
7	009	Spinal Disorders & Injuries	10,035	3.2	63.4	6.3	51.0
8	245	Bone Diseases & Specific Arthropathies W/O Cc	8,786	2.8	66.1	1.9	17.1
9	236	Fractures Of Hip & Pelvis	8,300	2.6	68.8	3.1	29.9
10	087	Pulmonary Edema & Respiratory Failure	7,989	2.5	71.3	2.3	23.5
11	247	Signs & Symptoms Of Musculoskeletal System & Conn Tissue	7,603	2.4	73.7	2.2	23.8
12	430	Psychoses	7,487	2.4	76.1	2.6	27.9
13	035	Other Disorders Of Nervous System W/O Cc	6,493	2.1	78.1	2.9	35.9
14	127	Heart Failure & Shock	6,331	2.0	80.1	1.6	19.9
15	088	Chronic Obstructive Pulmonary Disease	5,188	1.6	81.8	1.5	22.6
16	034	Other Disorders Of Nervous System W Cc	4,780	1.5	83.3	2.3	38.6
17	014	Intracranial Hemorrhage Or Cerebral Infarction	3,951	1.3	84.5	2.1	42.8
18	248	Tendonitis, Myositis & Bursitis	3,866	1.2	85.8	1.3	27.4
19	243	Medical Back Problems	2,990	0.9	86.7	0.9	24.5
20	428	Disorders Of Personality & Impulse Control	2,405	0.8	87.5	0.9	31.2
21	467	Other Factors Influencing Health Status	2,379	0.8	88.2	0.6	21.6
22	013	Multiple Sclerosis & Cerebellar Ataxia	1,905	0.6	88.8	0.8	33.9
23	244	Bone Diseases & Specific Arthropathies W Cc	1,542	0.5	89.3	0.4	21.2
24	429	Organic Disturbances & Mental Retardation	1,506	0.5	89.8	0.4	23.4
25	133	Atherosclerosis W/O Cc	1,459	0.5	90.2	0.3	16.9
26	023	Nontraumatic Stupor & Coma	1,433	0.5	90.7	1.7	93.9
27	019	Cranial & Peripheral Nerve Disorders W/O Cc	1,383	0.4	91.1	0.5	30.2
28	073	Other Ear, Nose, Mouth & Throat Diagnoses Age >17	1,290	0.4	91.5	0.2	13.6
29	522	Alc/Drug Abuse Or Depend W Rehabilitation Therapy W/O Cc	1,275	0.4	92.0	0.4	24.4
30	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	1,209	0.4	92.3	0.4	24.3
		Total (top 30 DRGs)	*291,738*	*92.3*		*92.8*	
		Grand Total	*315,956*	*100.0*		*100.0*	*25.5*

Source: *data from the Ministry of Health – SDO 2017*

Table S/30 – AIOP accredited hospitals: top 30 DRGs according to the number of discharges (DRG Version 24.0) – Inpatient admissions for rehabilitation treatment. Year 2018

Rank	DRG		Discharges			% in-hospital days	Average length of stay	In-hospital days
			Number	%	% cumul.			
1	256	Other Musculoskeletal System & Connective Tissue Diagnoses	33,514	32.5	32.5	20.4	14.9	499,335
2	012	Degenerative Nervous System Disorders	7,702	7.5	40.0	12.8	40.6	312,857
3	249	Aftercare, Musculoskeletal System & Connective Tissue	7,117	6.9	46.9	7.3	25.0	177,943
4	145	Other Circulatory System Diagnoses W/O Cc	6,196	6.0	52.9	4.1	16.4	101,442
5	477	Non-extensive O.R. Proc Unrelated To Principal Diagnosis	4,913	4.8	57.7	4.3	21.2	104,344
6	430	Psychoses	4,613	4.5	62.1	5.4	28.5	131,587
7	462	Rehabilitation	3,074	3.0	65.1	2.8	21.9	67,327
8	247	Signs & Symptoms Of Musculoskeletal System & Conn Tissue	2,986	2.9	68.0	3.5	28.7	85,578
9	245	Bone Diseases & Specific Arthropathies W/O Cc	2,973	2.9	70.9	2.9	23.8	70,747
10	236	Fractures Of Hip & Pelvis	2,861	2.8	73.7	3.9	33.2	94,918
11	144	Other Circulatory System Diagnoses W Cc	2,641	2.6	76.2	2.3	20.9	55,255
12	088	Chronic Obstructive Pulmonary Disease	1,428	1.4	77.6	1.4	23.5	33,551
13	428	Disorders Of Personality & Impulse Control	1,300	1.3	78.9	1.6	29.9	38,922
14	009	Spinal Disorders & Injuries	1,295	1.3	80.1	2.7	50.1	64,890
15	035	Other Disorders Of Nervous System W/O Cc	1,275	1.2	81.4	1.9	35.9	45,721
16	087	Pulmonary Edema & Respiratory Failure	1,156	1.1	82.5	1.1	23.8	27,460
17	014	Intracranial Hemorrhage Or Cerebral Infarction	992	1.0	83.5	2.0	48.6	48,247
18	522	Alc/Drug Abuse Or Depend W Rehabilitation Therapy W/O Cc	988	1.0	84.4	1.0	24.5	24,231
19	248	Tendonitis, Myositis & Bursitis	928	0.9	85.3	1.1	29.9	27,766
20	127	Heart Failure & Shock	872	0.8	86.2	0.7	20.3	17,734
21	243	Medical Back Problems	772	0.7	86.9	0.8	26.9	20,736
22	019	Cranial & Peripheral Nerve Disorders W/O Cc	734	0.7	87.6	0.8	27.8	20,379
23	467	Other Factors Influencing Health Status	673	0.7	88.3	0.6	21.1	14,226
24	468	Extensive O.R. Procedure Unrelated to Principal Diagnosis	609	0.6	88.9	0.7	27.7	16,870
25	034	Other Disorders Of Nervous System W Cc	605	0.6	89.5	1.0	40.2	24,322
26	133	Atherosclerosis W/O Cc	572	0.6	90.0	0.4	17.5	10,029
27	244	Bone Diseases & Specific Arthropathies W Cc	564	0.5	90.6	0.5	20.3	11,422
28	297	Nutritional & Misc Metabolic Disorders Age >17 W/O Cc	548	0.5	91.1	0.5	24.0	13,165
29	013	Multiple Sclerosis & Cerebellar Ataxia	538	0.5	91.6	0.7	33.8	18,175
30	523	Alc/Drug Abuse Or Depend W/O Rehabilitation Therapy W/O Cc	504	0.5	92.1	0.6	26.9	13,566
		Total (top 30 DRGs)	*94,943*	*92.1*			*23.1*	*2,192,745*
		Grand Total	*103,081*				*23.7*	*2,444,523*

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 2017

MDC	*Number of cases*	*%*	*In-hospital days*	*Average length of stay*
01 – Diseases and Disorders of the Nervous System	414,112	6.6	3,420,647	8.3
02 – Diseases and Disorders of the Eye	69,714	1.1	198,869	2.9
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	206,117	3.3	632,656	3.1
04 – Diseases and Disorders of the Respiratory System	580,978	9.3	5,625,400	9.7
05 – Diseases and Disorders of the Circulatory System	896,378	14.3	6,399,534	7.1
06 – Diseases and Disorders of the Digestive System	554,650	8.9	3,897,567	7.0
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	295,100	4.7	2,304,398	7.8
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	807,381	12.9	4,936,152	6.1
09 – Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	178,906	2.9	741,859	4.1
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	161,260	2.6	863,656	5.4
11 – Diseases and Disorders of the Kidney and Urinary Tract	366,787	5.9	2,432,215	6.6
12 – Diseases and Disorders of the Male Reproductive System	106,745	1.7	488,374	4.6
13 – Diseases and Disorders of the Female Reproductive System	178,904	2.9	712,900	4.0
14 – Pregnancy, Childbirth and the Puerperium	570,904	9.1	2,186,829	3.8
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	112,738	1.8	923,081	8.2
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	69,987	1.1	566,342	8.1
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	141,685	2.3	1,108,760	7.8
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	138,823	2.2	1,521,953	11.0
19 – Mental Diseases and Disorders	138,732	2.2	1,716,284	12.4
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	13,921	0.2	102,938	7.4
21 – Injuries, Poisonings and Toxic Effects of Drugs	48,624	0.8	303,798	6.2
22 – Burns	3,710	0.1	51,707	13.9
23 – Factors Influencing Health Status and Other Contacts with Health Services	88,570	1.4	402,162	4.5
24 – Multiple Significant Trauma	9,133	0.1	128,707	14.1
25 – H.I.V. infections	5,672	0.1	94,955	16.7
Other DRGs	69,095	1.1	611,463	8.8
Pre MDC	27,399	0.4	975,189	35.6
Grand Total	*6,256,025*	*100.0*	*43,348,395*	*6.9*

Source: *data from the Ministry of Health – SDO 2017*

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 2017

MDC	*Number of cases*	*%*	*Accesses*	*Average number of accesses*
01 – Diseases and Disorders of the Nervous System	68,683	3.8	167,719	2.4
02 – Diseases and Disorders of the Eye	117,048	6.4	206,369	1.8
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	119,713	6.6	206,599	1.7
04 – Diseases and Disorders of the Respiratory System	31,819	1.7	89,703	2.8
05 – Diseases and Disorders of the Circulatory System	104,586	5.7	206,692	2.0
06 – Diseases and Disorders of the Digestive System	155,960	8.6	265,145	1.7
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	25,538	1.4	89,407	3.5
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	233,102	12.8	440,997	1.9
09 – Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	150,298	8.3	277,962	1.8
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	53,787	3.0	121,694	2.3
11 – Diseases and Disorders of the Kidney and Urinary Tract	69,664	3.8	170,345	2.4
12 – Diseases and Disorders of the Male Reproductive System	69,579	3.8	105,461	1.5
13 – Diseases and Disorders of the Female Reproductive System	165,704	9.1	220,160	1.3
14 – Pregnancy, Childbirth and the Puerperium	102,862	5.6	152,477	1.5
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	1,639	0.1	3,844	2.3
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	41,795	2.3	256,120	6.1
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	153,489	8.4	1,208,178	7.9
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	5,943	0.3	22,110	3.7
19 – Mental Diseases and Disorders	37,106	2.0	178,698	4.8
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	959	0.1	8,947	9.3
21 – Injuries, Poisonings and Toxic Effects of Drugs	9,454	0.5	25,588	2.7
22 – Burns	279	0.0	979	3.5
23 – Factors Influencing Health Status and Other Contacts with Health Services	91,029	5.0	184,093	2.0
24 – Multiple Significant Trauma	1	0.0	1	1.0
25 – H.I.V. infections	8,119	0.4	33,580	4.1
Other DRGs	2,671	0.1	5,066	1.9
Pre MDC	80	0.0	142	1.8
Grand Total	*1,820,907*	*100.0*	*4,648,076*	*2.7*

Source: *data from the Ministry of Health – SDO 2017*

Table S/33 – Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) – Inpatient admissions for rehabilitation. Year 2017

MDC	*Number of cases*	*%*	*In-hospital days*	*Average length of stay*
01 – Diseases and Disorders of the Nervous System	72,364	22.9	2,992,419	41.4
02 – Diseases and Disorders of the Eye	54	0.0	577	10.7
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	1,320	0.4	17,977	13.6
04 – Diseases and Disorders of the Respiratory System	16,554	5.2	371,991	22.5
05 – Diseases and Disorders of the Circulatory System	45,801	14.5	838,596	18.3
06 – Diseases and Disorders of the Digestive System	166	0.1	3,231	19.5
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	46	0.0	869	18.9
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	145,255	46.0	2,983,857	20.5
09 – Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	151	0.0	4,067	26.9
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	1,974	0.6	45,981	23.3
11 – Diseases and Disorders of the Kidney and Urinary Tract	461	0.1	5,338	11.6
12 – Diseases and Disorders of the Male Reproductive System	3	0.0	40	13.3
13 – Diseases and Disorders of the Female Reproductive System	12	0.0	102	8.5
14 – Pregnancy, Childbirth and the Puerperium	0	0.0	0	0.0
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	11	0.0	604	54.9
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	32	0.0	408	12.8
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	64	0.0	1,971	30.8
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	142	0.0	2,940	20.7
19 – Mental Diseases and Disorders	13,257	4.2	369,702	27.9
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	2,429	0.8	55,105	22.7
21 – Injuries, Poisonings and Toxic Effects of Drugs	265	0.1	6,683	25.2
22 – Burns	4	0.0	163	40.8
23 – Factors Influencing Health Status and Other Contacts with Health Services	14,894	4.7	334,290	22.4
24 – Multiple Significant Trauma	155	0.0	7,217	46.6
25 – H.I.V. infections	3	0.0	46	15.3
Other DRGs	497	0.2	11,882	23.9
Pre MDC	42	0.0	1,715	40.8
Grand Total	*315,956*	*100.0*	*8,057,771*	*25.5*

Source: *data from the Ministry of Health – SDO 2017*

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 2017

MDC	*Number of cases*	*%*	*Accesses*	*Average number of accesses*
01 – Diseases and Disorders of the Nervous System	11,320	37.2	167,007	14.8
02 – Diseases and Disorders of the Eye	23	0.1	54	2.3
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	225	0.7	597	2.7
04 – Diseases and Disorders of the Respiratory System	1,205	4.0	15,976	13.3
05 – Diseases and Disorders of the Circulatory System	4,078	13.4	53,910	13.2
06 – Diseases and Disorders of the Digestive System	54	0.2	511	9.5
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	0	0.0	0	0.0
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	6,093	20.0	119,914	19.7
09 – Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	34	0.1	746	21.9
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	65	0.2	937	14.4
11 – Diseases and Disorders of the Kidney and Urinary Tract	228	0.7	2,855	12.5
12 – Diseases and Disorders of the Male Reproductive System	1	0.0	8	8.0
13 – Diseases and Disorders of the Female Reproductive System	11	0.0	165	15.0
14 – Pregnancy, Childbirth and the Puerperium	0	0.0	0	0.0
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	3	0.0	16	5.3
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	3	0.0	21	7.0
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	7	0.0	90	12.9
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	2	0.0	10	5.0
19 – Mental Diseases and Disorders	2,165	7.1	26,118	12.1
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	0	0.0	0	0.0
21 – Injuries, Poisonings and Toxic Effects of Drugs	16	0.1	407	25.4
22 – Burns	0	0.0	0	0.0
23 – Factors Influencing Health Status and Other Contacts with Health Services	4,911	16.1	67,294	13.7
24 – Multiple Significant Trauma	2	0.0	41	20.5
25 – H.I.V. infections	0	0.0	0	0.0
Other DRGs	4	0.0	39	9.8
Pre MDC	0	0.0	0	0.0
Grand Total	*30,450*	*100.0*	*456,716*	*15.0*

Source: *data from the Ministry of Health – SDO 2017*

Table S/35 – Total number of public and private facilities: description of activities classified according to the Major Diagnostic Categories (MDC) – Long-stay care admissions. Year 2017

MDC	*Number of cases*	*%*	*In-hospital days*	*Average length of stay*
01 – Diseases and Disorders of the Nervous System	15,818	16.0	438,763	27.7
02 – Diseases and Disorders of the Eye	55	0.1	1,056	19.2
03 – Diseases and Disorders of The Ear, Nose, Mouth and Throat	280	0.3	5,860	20.9
04 – Diseases and Disorders of the Respiratory System	13,739	13.9	285,311	20.8
05 – Diseases and Disorders of the Circulatory System	11,533	11.6	256,444	22.2
06 – Diseases and Disorders of the Digestive System	3,618	3.7	75,793	20.9
07 – Diseases and Disorders of the Hepatobiliary System and Pancreas	2,406	2.4	49,218	20.5
08 – Diseases and Disorders of the Musculoskeletal System and Connective Tissue	23,177	23.4	613,218	26.5
09 – Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	1,486	1.5	33,686	22.7
10 – Endocrine, Nutritional and Metabolic Diseases and Disorders	2,099	2.1	45,541	21.7
11 – Diseases and Disorders of the Kidney and Urinary Tract	3,531	3.6	73,801	20.9
12 – Diseases and Disorders of the Male Reproductive System	235	0.2	5,200	22.1
13 – Diseases and Disorders of the Female Reproductive System	242	0.2	5,425	22.4
14 – Pregnancy, Childbirth and the Puerperium	5	0.0	116	23.2
15 – Newborns and other Neonates with Conditions Originating in Perinatal Period	8	0.0	173	21.6
16 – Diseases and Disorders of the Blood, Blood Forming Organs, Immunological disorders	1,163	1.2	23,611	20.3
17 – Myeloproliferative Diseases & Disorders, Poorly Differentiated Neoplasms	1,209	1.2	25,458	21.1
18 – Infectious and Parasitic Diseases, Systemic or Unspecified Sites	3,165	3.2	73,790	23.3
19 – Mental Diseases and Disorders	4,459	4.5	133,810	30.0
20 – Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	353	0.4	8,534	24.2
21 – Injuries, Poisonings and Toxic Effects of Drugs	832	0.8	22,043	26.5
22 – Burns	21	0.0	499	23.8
23 – Factors Influencing Health Status and Other Contacts with Health Services	9,449	9.5	200,763	21.2
24 – Multiple Significant Trauma	108	0.1	3,501	32.4
25 – H.I.V. infections	16	0.0	420	26.3
Other DRGs	85	0.1	2,710	31.9
Pre MDC	26	0.0	1,183	45.5
Grand Total	*99,118*	*100.0*	*2,385,927*	*24.1*

Source: *data from the Ministry of Health – SDO 2017*

Table S/36 – Activities of accredited hospitals[1] classified according to specialty. Year 2013 (National Data)

Specialty	Total					AIOP-associated Private hospitals (accredited healthcare facilities)				
	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %
Angiology	34	619	6,052	9.8	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	69.8	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	56	1,617	10,334	6.4	50.6	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	44.8
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	8	5	21	4.2	0.7
Gastroenterology	31	816	6,410	7.9	56.7	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, nutritional and metabolic diseases	37	635	5,820	9.2	43.1	37	635	5,820	9.2	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	6.0	48.1	66	2,251	13,534	6.0	56.2
Neonatology	66	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	90,900	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	64.7	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	80.9
Pneumology	159	5,097	41,913	8.2	72.2	119	3,815	30,382	8.0	69.9
Psychiatry	1,894	20,600	530,486	25.8	76.7	1,689	18,652	487,565	26.1	79.1

./.

(Continued) *Table S/36 – Activities of accredited hospitals[1] classified according to specialty. Year 2013 (National Data)*

Specialty	*Total*					*AIOP-associated Private hospitals (accredited healthcare facilities)*				
	Patient beds	*Inpatients*	*In-hospital days*	*Average length of stay*	*Occupancy rate %*	*Patient beds*	*Inpatients*	*In-hospital days*	*Average length of stay*	*Occupancy rate %*
Radiation Therapy	10	114	1,142	10.0	31.3	10	114	1,142	10.0	31.3
Functional recovery and rehabilitation	11,296	151,245	3,612,651	23.9	87.6	7,006	96,889	2,280,481	23.5	89.2
Rheumatology	45	1,845	14,230	7.7	86.6	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	86.9	8	237	4,225	17.8	144.7
Coronary care unit	144	8,940	34,311	3.8	65.3	88	4,727	22,435	4.7	69.8
Spinal care unit	25	152	8,932	58.8	97.9					
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*	*9.0*	*67.2*	*30,222*	*856,917*	*7,274,903*	*8.5*	*65.9*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health*

Table S/58 – Activities of accredited hospitals[1] classified according to specialty. Year 2013 (North)

Specialty	Total					AIOP-associated Private hospitals (accredited healthcare facilities)				
	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %
Heart Surgery	240	8,496	70,138	8.3	80.1	192	6,825	55,102	8.1	78.6
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	6,886	6.1	43.9	43	1,126	6,886	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	8	5	21	4.2	0.7	8	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	76	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	80.9
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	76.7
Functional recovery and rehabilitation	6,076	87,532	1,995,836	22.8	90.0	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	6.0	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*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health*

Table S/59 – Activities of accredited hospitals[1] classified according to specialty. Year 2013 (Center)

Specialty	Total					AIOP-associated Private hospitals (accredited healthcare facilities)				
	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy 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	6.6	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	87.9
Long-stay care pts	978	9,616	327,542	34.1	91.8	558	5,760	178,200	30.9	87.5
Endocrine, nutritional 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	569	4,603	8.1	26.8	27	495	3,434	6.9	34.8
Neonatology	16	428	1,643	3.8	28.1	9	45	73	1.6	2.2
Neurosurgery	14	257	1,975	7.7	38.6					
Neurology	41	469	12,063	25.7	80.6	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	987	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	98	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	90.6	189	2,263	66,731	29.5	96.7
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*	*67.1*	*4,800*	*125,653*	*1,116,759*	*8.9*	*63.7*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
Source: *processing by Ermeneia – data from the Ministry of Health*

Table S/60 – Activities of accredited hospitals[1] classified according to specialty. Year 2017 (South)

Specialty	Total					AIOP-associated Private hospitals (accredited healthcare facilities)				
	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy rate %	Patient beds	Inpatients	In-hospital days	Average length of stay	Occupancy 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	68,967	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	66,886	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	6.6	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	8.6	53.5
Geriatrics	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, nutritional and metabolic diseas	27	602	5,516	9.2	56.0	27	602	5,516	9.2	56.0
General medicine	1,474	57,144	386,684	6.8	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	769	4,038	5.3	50.3	8	474	1,994	4.2	68.3
Neurosurgery	76	3,587	17,348	4.8	62.5	71	3,467	16,413	4.7	63.3
Neurology	666	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	97.6	145	957	51,665	54.0	97.6
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	68.9	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	60.0
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	68	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

./.

(Continued) *Table S/60 – Activities of accredited hospitals[1] classified according to specialty. Year 2017 (South)*

Specialty	*Total*					*AIOP-associated Private hospitals (accredited healthcare facilities)*				
	Patient beds	*Inpatients*	*In-hospital days*	*Average length of stay*	*Occupancy rate %*	*Patient beds*	*Inpatients*	*In-hospital days*	*Average length of stay*	*Occupancy rate %*
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	89.0
Rheumatology	45	1,845	14,230	7.7	86.6	15	919	7,541	8.2	137.7
Intensive care	136	4,753	25,348	5.3	51.1	89	2,950	18,314	6.2	56.4
Neonatal intensive care	17	259	4,471	17.3	72.1	8	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	97.9					
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*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.
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 2014-2018

Regions	2014		2015		2016		2017		2018			
	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow/Outflow Ratio	Mobility balance(b)
– Piedmont	0.86	1.17	0.84	1.19	0.88	1.14	0.86	1.17	0.88	1.13	1.3	-3,749
– Aosta Valley	0.69	1.45	0.69	1.45	0.78	1.28	0.83	1.20	0.75	1.33	1.8	-596
– Lombardy	2.44	0.41	2.53	0.39	2.64	0.38	2.63	0.38	2.60	0.38	0.1	74,947
– A.P. of Trento	0.63	1.60	0.65	1.54	0.65	1.55	0.68	1.46	0.67	1.49	2.2	-2,687
– Veneto	1.17	0.85	1.27	0.79	1.30	0.77	1.34	0.75	1.32	0.76	0.6	10,415
– Friuli V.G.	1.56	0.64	1.30	0.77	1.35	0.74	1.25	0.80	1.23	0.81	0.7	2,235
– Liguria	0.68	1.47	0.68	1.47	0.66	1.51	0.71	1.41	0.71	1.42	2.0	-8,005
– Emilia Romagna	2.44	0.41	2.41	0.41	2.39	0.42	2.40	0.42	2.43	0.41	0.2	49,151
– Tuscany	2.00	0.50	1.98	0.51	1.95	0.51	1.77	0.57	1.73	0.58	0.3	20,197
– Umbria	1.46	0.69	1.40	0.71	1.30	0.77	1.17	0.85	1.16	0.87	0.7	2,136
– Marche	0.92	1.09	0.84	1.19	0.80	1.24	0.77	1.30	0.84	1.19	1.4	-3,897
– Lazio	0.92	1.08	0.87	1.15	0.86	1.16	0.90	1.11	0.92	1.09	1.2	-4,457
– Abruzzo	0.64	1.57	0.67	1.49	0.68	1.48	0.69	1.44	0.65	1.55	2.4	-9,206
– Molise	1.17	0.85	1.16	0.86	1.04	0.96	1.03	0.97	1.05	0.96	0.9	582
– Campania	0.32	3.10	0.33	3.00	0.32	3.12	0.31	3.25	0.30	3.34	11.2	-38,879
– Apulia	0.55	1.82	0.55	1.81	0.57	1.74	0.54	1.86	0.53	1.90	3.6	-19,621
– Basilicata	0.83	1.20	0.82	1.22	0.79	1.27	0.74	1.36	0.72	1.38	1.9	-4,510
– Calabria	0.12	8.01	0.12	8.18	0.12	8.47	0.12	8.39	0.12	8.37	70.0	-33,510
– Sicily	0.31	3.24	0.28	3.61	0.25	3.98	0.25	4.03	0.24	4.10	16.8	-25,589
– Sardinia	0.33	3.02	0.33	3.05	0.33	2.99	0.34	2.97	0.36	2.77	7.7	-5,796

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 data on staffing prepared by the Ministry of Health for the year 2017, 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 further reduced 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, focusing the analysis on trends recorded in the period 2013-2017 (see Table S/62), we can observe there was a decrease of 7,986 units, with the number of personnel going from 462,518 to 454,532 employees, resulting in a corresponding reduction of 1.7%.

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 218 units, of nurses by 2,663 units, and of other staff by 5,105 units, as shown by the data in the following table:

	2013	*2017*
– Medical doctors and Dentists	85,146	84,928
– Nurses	214,301	211,638
– Other staff	163,071	157,966

An analysis of the indicator that shows the relationship between the personnel of the public facilities and the corresponding data relating to the number of patient beds, shows that there is also a slight improvement for 2015 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).

On the other hand, considering the staff of the AIOP facilities, we can see an increase between 2013 and 2018 of 6,048 units, equal to +9.3% 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 consistency 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 accredited 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 2018, are instead shown in Table S/68, which makes it possible to observe that the total number of operators employed was 63,777 units. The overall workforce of these facilities is rounded out by 7,461 units of medical personnel and 4,741 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.)

Type of institution Role	*2013*		*2014*		*2015*		*2016*		*2017*	
	Hospital Centers (*)	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*
Medical doctors and Dentists	34,953	50,193	34,646	50,070	33,640	50,095	33,785	50,956	34,264	50,664
Nurses	93,622	120,679	93,119	119,010	90,937	119,313	90,096	120,456	90,343	121,295
Other	81,072	81,999	79,862	80,172	76,894	79,721	77,163	82,646	77,098	80,868
Total	*209,647*	*252,871*	*207,627*	*249,252*	*201,471*	*249,129*	*201,044*	*254,058*	*201,705*	*252,827*

(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, 2016 and 2017*

Table S/63 – Hospital Center and local health service (ASL) hospitalization facility staff (% var.)

	2014/2013		*2015/2014*		*2016/2015*		*2017/2016*		*2017/2013*	
	Hospital Centers (*)	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*
Medical doctors and Dentists	-0.9	-0.2	-2.9	0.0	0.4	1.7	1.4	-0.6	-2.0	0.9
Nurses	-0.5	-1.4	-2.3	0.3	-0.9	1.0	0.3	0.7	-3.5	0.5
Other	-1.5	-2.2	-3.7	-0.6	0.3	3.7	-0.1	-2.2	-4.9	-1.4
Total	*-1.0*	*-1.4*	*-3.0*	*0.0*	*-0.2*	*2.0*	*0.3*	*-0.5*	*-3.8*	*0.0*

(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, 2016 and 2017*

Table S/64 – Hospital Center and local health service (ASL) hospitalization facility staff

	2013		2014		2015		2016		2017	
	Hospital Centers (*)	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*	*Hospital Centers (*)*	*ASL hospitalization facilities (**)*
Medical doctors per 10 patient beds	7.8	4.7	7.9	4.8	8.4	6.1	8.5	6.4	8.5	6.5
Nurses per 10 patient beds	20.8	11.3	21.3	11.4	22.8	14.6	22.6	15.0	22.5	15.4

(*) NHS staff and University staff.
(**)Residual mental health facilities are included.
Note: the numbers of medical doctors and nurses per patient bed has been calculated considering patient beds actually used.
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 2017*

Table S/65 – Staff working in medical institutions associated with AIOP. 2011-2016 Years 2013-2018

Role	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*
Contract employee and self-employed doctors	11,773	11,815	11,948	12,191	12,340	12,136
Nurses	19,175	19,316	20,032	21,147	21,241	21,087
Other	34,242	34,537	34,445	36,307	36,572	38,015
Total	*65,190*	*65,668*	*66,425*	*69,645*	*70,153*	*71,238*

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 2013-2018 (% var.)

	2014/2013	*2015/2014*	*2016/2015*	*2017/2016*	*2018/2017*	*2018/2013*
Contract employee and self-employed doctors	0.4	1.1	2.0	1.2	-1.7	3.1
Nurses	0.7	3.7	5.6	0.4	-0.7	10.0
Other	0.9	-0.3	5.4	0.7	3.9	11.0
Total	*0.7*	*1.2*	*4.8*	*0.7*	*1.5*	*9.3*

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*	*Auxiliary health 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	6,876
– 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
Italy	*124,428*	*268,170*	*240,132*	*632,730*

Source: *ISTAT, healthcare institution facilities and activities*

Table S/68 – Staff working in medical institutions associated with AIOP Updated to December, 31st 2018

Regions	*Contract employee operators*							*Self-employed professionals*	
	Medical personnel	*Nurses*	*Technicians*	*Auxiliary staff in Health and Social Care Settings*	*Other caregiver staff*	*Other staff*	*Total*	*Medical personnel*	*Non-medical personnel*
– Piedmont	205	1,073	315	448	539	1,026	3,606	573	345
– Aosta Valley	1	12	4	3	14	9	43	2	23
– Lombardy	1,355	5,718	1,734	1,739	2,028	4,629	17,203	2,174	939
– A.P. of Bolzano	3	67	33	21	33	39	196	10	19
– A.P. of Trento	17	81	25	37	88	72	320	5	15
– Veneto	286	1,417	407	215	811	941	4,077	314	169
– Friuli Venezia Giulia	51	171	83	27	137	174	643	48	41
– Liguria	3	128	17	9	12	150	319	16	41
– Emilia Romagna	154	1,988	466	386	930	1,065	4,989	667	550
– Tuscany	132	666	180	130	410	386	1,904	395	169
– Umbria	13	86	61	11	96	44	311	71	10
– Marche	78	340	69	77	150	265	979	123	82
– Lazio	630	3,399	1,249	1,698	1,222	2,559	10,757	1,221	825
– Abruzzo	57	342	111	150	27	149	836	33	47
– Molise	103	292	94	67	19	228	803	7	422
– Campania	790	2,061	732	748	628	1,486	6,445	550	491
– Apulia	206	916	427	265	756	649	3,219	98	140
– Basilicata	10	68	27	7	133	70	315	2	3
– Calabria	122	342	147	144	240	318	1,313	203	117
– Sicily	369	1,561	367	877	204	1,194	4,572	845	194
– Sardinia	90	359	57	71	150	200	927	104	99
Italy	*4,675*	*21,087*	*6,605*	*7,130*	*8,627*	*15,653*	*63,777*	*7,461*	*4,741*

Source: *AIOP*

4. Spending data

4.1. Economic flow trends over the years

The expenditure for the components analyzed at consolidated values attributed to the National Health Service was also processed for 2017 starting from information extrapolated from various institutional sources, since there have been no updates to the "Health Report" previously contained in the various editions of the General Report on the country's economic situation since 2013. From this work, published by the Ministry of Economy and Finance until the year 2012, it was possible to extract the historical series of coordinated data flows on healthcare expenditure, with a specific detail dedicated to the various functions that make it up. The historical series presented this year for the 2013-2017 period is thus no longer affected by the methodological break that occurred in 2012, as the criteria for defining the various components of healthcare expenditure adopted by the sources used from 2013 – Court of Auditors, Agenas and MEF – are characterized by their temporal coherence.

Total public spending for the area of hospitalizations is estimated at just over EUR 63.6 billion for 2017, compared to EUR 63.1 million a year earlier (with a 0.9% increase) (Table S/69).

Within this funding aggregate, the amount assigned to the activity of accredited hospitals alone (thus excluding the other types that fall under the "Accredited hospital" expenditure item such as, for example, Institutes for Treatment and Research and religiously-affiliated classified hospitals) is EUR 4.3 billion, or 6.8% of total public hospital expenditure; this amount then sees a slight decrease after the more marked one reported in 2013 as a direct consequence of the effects of the spending review measure (Law 135/12), described in previous editions of the Report, and of the subsequent penalizing measures to contain healthcare spending.

The analysis at constant prices, which presents the levels of expenditure in real terms (Table S/70), as always makes the calculation based on the GDP deflator which, however, is now aligned with the new Istat series linked to 2015; the change in total public hospital expenditure between the new base year and 2017 is slightly up (0.3%), compared to a decrease of the same amount recorded by overall healthcare spending. In the same period, on the other hand, spending for accredited hospitals experienced, in real terms, a more marked reduction (-2.1%), 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 2019, in fact, the indicator of national wealth reversed its negative trend starting only in 2015, thereby also registering a drop of -0.4% for 2017 compared to 2010.

4.2. Health expenditure comparisons

The November 2019 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 2017, the propensity for the gradual decline in resources in terms of GDP assigned to the NHS is confirmed for Italy, thereby accentuating the gap accumulated over time compared to the average for both OECD Europe countries and those of the G7 group (6.5% compared to 7.1% and 9.1%, respectively). This trend is officially confirmed by the forecast data of the latest version of the Economic and Financial Document released by the MEF in April 2019, which predicted a trend in the spending curve – GDP pushing upwards to a value of 6.4% in 2022. The update note (NADEF) of last September then partially corrected this forecast, bringing it to 6.5%. These values, while not showing striking reductions, are however dramatically distant from those of countries such as France and Germany with whom we should be comparable due to our economic and cultural affinities.

Even in terms of total health expenditure, Italy shows a ratio to GDP below the average of the G7 countries (8.8% compared to 11.4%), still remaining below the average of OECD Europe (which is 9.3%).

The slight decrease in the overall Italian healthcare expenditure reported by the OECD for the 2015-2017 three-year period, 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 Report. Again in terms of total health expenditure, Italy is still below the 2017 values of the most industrialized countries, the United States, France, Germany and Canada (which present values of 17.1%, 11.3%, 11.2% and 10.7%, respectively). And, 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 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 undeclared defunding, which may make our health care system slip into a "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 adjustments of the health fund to current values in the last Economy and Finance Document, which proposed funding of EUR 115.4 billion for 2018, will not permit the introduction of real resources to reduce the criticality in terms of access to treatment, but will be more realistically absorbed by the costs for the renewal of personnel contracts and by the coverage of essential levels of care obligations.

Finally, taking into consideration the amount of healthcare spending reserved for hospital activities provided by the publicly-operated and privately-operated components of the NHS (Table S/72), and again with reference to the year 2017, it can be seen that Italy has:

– a higher proportion (57.3%%) of total public healthcare spending compared to the average for the G7 countries (43.1%), and compared to that of European OECD countries (45.6%);
– a GDP spending ratio slightly below the average of the G7 countries but still higher than that of European OECD countries (3.8% and 3.2%, respectively).

Table S/69 – Current health spending. Years 2013-2017 (in billions of euro)

	2013	*2014*	*2015*	*2016*	*2017*
Public hospital facilities	52.244	52.744	53.847	54.566	55.226
Accredited hospitals (as a whole)	8.255	8.425	8.466	8.484	8.419
of which: accredited hospitals[1]	*4.263*	*4.289*	*4.335*	*4.351*	*4.321*
Total public hospital system expenditure	60.499	61.169	62.313	63.050	63.645
Other expenditure features	51.185	51.504	50.354	50.681	50.694
Total public healthcare expenditure	*111.684*	*112.673*	*112.667*	*113.731*	*114.339*

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

Source: *data processed by Ermeneia from the 2015, 2016, 2017, 2018 and 2019 "Report on the coordination of public finance" by the Court of Auditors, the 2018 Agenas Report on the monitoring of the health spending of the Regions and the 2019 MEF Report on the monitoring of the healthcare spending.*

Table S/70 – Healthcare expenditure at constant prices (*). Years 2013-2017 (in billions of euro)

	2013	*2014*	*2015*	*2016*	*2017*
Public hospital facilities	53.212	53.236	53.847	53.953	54.231
Accredited hospitals (as a whole)	8.408	8.504	8.466	8.389	8.267
of which: accredited hospitals[1]	*4.342*	*4.329*	*4.335*	*4.302*	*4.243*
Total public hospital system expenditure	61.620	61.739	62.313	62.342	62.498
Other expenditure features	52.134	51.984	50.354	50.112	49.781
Total public healthcare expenditure	*113.754*	*113.723*	*112.667*	*112.453*	*112.279*

(*) GDP deflator calculated on the basis of the new ISTAT series in a chained series with reference to 2015.

(1) Code 5.1 institutes (Accredited private healthcare facilities) in the ministerial classification.

Source: *data processed by Ermeneia from the 2015, 2016, 2017, 2018 and 2019 "Report on the coordination of public finance" by the Court of Auditors, the 2018 Agenas Report on the monitoring of the health spending of the Regions and the 2019 MEF Report on the monitoring of the healthcare spending*

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

% Values	*Total healthcare expenditure*			*Public healthcare expenditure*		
	2015	*2016*	*2017*	*2015*	*2016*	*2017*
United States	16.7	17.1	17.1	14.2	14.5	14.4
Japan	10.9	10.8	10.9	9.2	9.1	9.2
Germany	11.1	11.1	11.2	9.3	9.4	9.5
France	11.5	11.5	11.3	8.8	9.5	9.4
Italy	**9.0**	**8.9**	**8.8**	**6.7**	**6.6**	**6.5**
United Kingdom	9.7	9.7	9.6	7.7	7.7	7.6
Canada	10.6	10.8	10.7	7.5	7.6	7.4
Average of G7 countries (*)	11.4	11.4	11.4	9.1	9.2	9.1
Australia	9.3	9.2	9.2	6.4	6.3	6.3
Austria	10.4	10.4	10.4	7.7	7.7	7.7
Belgium	10.3	10.3	10.3	8.0	7.9	8.0
Denmark	10.2	10.2	10.1	8.6	8.6	8.5
Finland	9.7	9.4	9.2	7.4	7.1	6.9
Greece	8.1	8.3	8.0	4.7	5.1	4.9
Iceland	8.1	8.2	8.3	6.6	6.7	6.8
Ireland	7.3	7.4	7.2	5.3	5.4	5.3
Luxembourg	5.5	5.5	5.5	4.6	4.6	4.6
Holland	10.3	10.3	10.1	8.4	8.4	8.2
New Zealand	9.3	9.3	9.1	7.4	7.3	7.2
Norway	10.1	10.5	10.4	8.6	9.0	8.9
Portugal	9.0	9.0	9.0	5.9	6.0	5.9
Spain	9.1	9.0	8.9	6.5	6.4	6.3
Sweden	11.0	11.0	11.0	9.2	9.2	9.2
Switzerland	11.9	12.2	12.3	7.5	7.7	7.9
Turkey	4.1	4.3	4.2	3.2	3.4	3.3
Average of European OECD countries (*)	9.3	9.3	9.3	7.1	7.2	7.1
Average of all OECD countries (*)	9.7	9.8	9.7	7.5	7.6	7.5

(*) Averages are calculated as unweighted arithmetic means.
Source: *Ermeneia processing of "OECD Health Data 2019", OECD, Paris, November 2019*

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

% Values	*Public and accredited hospital expenditure / Total public healthcare spending*			*Public and accredited hospital expenditure/GDP*		
	2015	*2016*	*2017*	*2015*	*2016*	*2017*
United States	36.7	37.0	37.1	5.2	5.4	5.3
Japan	43.4	44.0	-	4.0	4.0	-
Germany	33.2	33.1	32.3	3.1	3.1	3.1
France	46.4	43.8	43.7	4.1	4.2	4.1
Italy	**57.2**	**57.7**	**57.3**	**3.8**	**3.8**	**3.7**
United Kingdom	48.9	48.6	49.3	3.8	3.7	3.7
Canada	39.3	38.8	38.8	2.9	2.9	2.9
Average of G7 countries (*)	43.6	43.3	43.1	3.8	3.9	3.8
Australia	50.7	50.1	-	3.2	3.2	-
Austria	46.5	46.8	47.1	3.6	3.6	3.6
Belgium	34.9	34.2	34.2	2.8	2.7	2.7
Denmark	49.6	49.5	49.5	4.3	4.2	4.2
Finland	42.6	42.9	44.7	3.1	3.0	3.1
Greece	48.3	49.2	47.7	2.3	2.5	2.3
Iceland	47.0	46.9	47.5	3.1	3.1	3.2
Ireland	35.2	35.6	36.0	1.9	1.9	1.9
Luxembourg	37.0	37.0	36.8	1.7	1.7	1.7
Holland	38.3	38.3	38.1	3.2	3.2	3.1
New Zealand	-	-	-	-	-	-
Norway	46.3	45.6	45.6	4.0	4.1	4.1
Portugal	54.2	54.9	55.3	3.2	3.3	3.3
Spain	56.2	56.0	55.9	3.6	3.6	3.5
Sweden	45.1	45.1	44.7	4.1	4.1	4.1
Switzerland	44.7	44.2	44.6	3.4	3.4	3.5
Turkey	54.9	55.6	55.8	1.8	1.9	1.8
Average of European OECD countries (*)	45.6	45.5	45.6	3.2	3.2	3.2
Average of all OECD countries (*)	45.1	45.0	44.9	3.3	3.3	3.3

(*) Averages are calculated as unweighted arithmetic means.

Source*: Ermeneia processing of "OECD Health Data 2019", OECD, Paris, November 2019*

 ISBN 9788835112747

Appendices

 ISBN 9788835112747

 ISBN 9788835112747

1. *Methods applied*

As in years past, different methods were used to prepare the 2019 Report.

The first of these focused on identifying and commenting on some key phenomena we wanted to analyze, taking into account what happened over the last twelve months. All of this was placed in Part One of this volume.

More precisely, the following situations have been described:

a) first of all that of the difficult pursuit of the "average level" of the services, that is, the provision of these with an acceptable guaranteed "mean" and at the same time availability in the various territories but also within the individual hospital, post-hospital and healthcare facilities operating throughout the entire country in general.

   In this regard, an attempt was made to show two types of phenomena:

   – the first is one that shows the stability and indeed the positive evolution of the system both on the objective level (seen through average statistical growth values relating to the complexity and effectiveness of the services) and on the subjective level (through the perceptions of users and citizens);
   – and the second is the one that instead recalls the weaknesses of the system, once again on the objective level (in terms of territorial differentiations among the services levels) and on the subjective level (in terms of critical opinions collected from citizens, users and *caregivers*);

b) and the situation relating to some specific inconveniences concerning increased waiting lists, the progressive de-hospitalization process that ended up expanding both medical and surgical outpatient services, the growing weakness of the "connections" between primary medical care and hospitals, among different parties and departments within hospitals and between hospitals and post-hospital facilities;

c) and finally, the situation relating to the economic-financial aspects that affect (and have affected) the National Health Service and which see a

progressive defunding process compared to the other countries which is accompanied by a resource policy geared substantially towards cost reduction for accredited facilities given the difficulty of impacting those of public facilities and their reorganization, despite the fact that they represent 87% of total public hospital expenditure: a difficulty that emerges – continuously over time – from the results of the evaluation of the Income Statements of public Hospital Centers, with reference to the last five years.

With regard to the evaluation of the Income Statements of the Hospital Centers and the identification of any areas of inefficiency, we continued the practice of the last few years of identifying the trend of the various Income Statement items of 33 public Hospital Centers in order to find any "anomalies". More precisely:

1) the fundamental items of the aforementioned 33 Hospital Centers (Revenues, Costs, Operating Results) present in the Income Statements were updated to the fiscal year 2018, completing a series of parallel data concerning the previous period 2014-2016. Table App. 1 below shows the absolute values of the items (in thousands of euros) for the individual Hospital Centers, grouping the results by the Regions they belong to and by the territorial areas of reference. It should be mentioned that the 33 Hospital Centers represent more than 3/4 of the national total, with 12 units located in the North, 7 in Central Italy, and 14 in the South. Not all of the Hospital Centers that were examined in the last Report were used this time, as Lombardy (with 29 Hospital Centers) has changed its organizational system, incorporating territorial-type activities within the Centers. This was also the case for some specific Centers in the Region of Friuli Venezia Giulia, Sardinia and Emilia Romagna;
2) then the Index Numbers (Year 2014: 100.0) were calculated starting from the absolute values present in Table App. 1 and, similarly, for the "by-function" activities, the % composition was also calculated with respect to revenues from healthcare services + co-payment charges.
   It was thus possible to verify, for the five-year period 2014-2018:
   - 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

*Table Appendix 1 – 2014-2018 comparison of the data relating to the Revenues and Costs items in the Income Statements of the Hospital Centers (in thousands of euros) **

Hospital Centers and University Hospital Centers (1)	Impatient admissions and day-hospital admissions (2)					Revenues from healthcare services and health-related social health services as per the IS (3)					Revenues from co-payment charges for external specialist services as per the IS (4)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	18,300	17,050	16,800	16,715	17,032	104,135	107,649	108,473	106,711	115,705	2,511	2,615	2,569	2,033	2,100
H.C. 2	28,200	32,590	28,500	32,807	33,675	183,365	190,873	193,471	196,411	216,567	6,900	6,564	5,598	5,567	5,875
H.C. 3	27,500	27,500	27,350	27,210	28,050	168,874	174,785	179,357	181,174	192,057	5,227	5,067	5,007	5,084	5,349
H.C. 4	25,100	25,600	25,550	25,430	29,476	149,070	154,878	162,387	165,300	174,991	3,142	3,297	3,273	3,250	3,174
H.C. 5	22,200	22,900	21,000	22,880	22,395	119,436	119,526	124,437	129,356	125,654	4,039	3,862	3,738	3,597	3,709
H.C. 6	84,150	95,050	94,800	94,325	94,925	529,186	542,128	540,077	537,733	550,225	15,181	13,454	12,178	12,072	12,714
Piedmont Total	**205,450**	**220,690**	**214,000**	**219,367**	**225,553**	**125,4066**	**1,289,839**	**1,308,202**	**1,316,685**	**1,375,199**	**37,000**	**34,859**	**32,363**	**31,603**	**32,921**
H.C. 7	52,360	57,100	**55,950**	**58,765**	**58,618**	411,834	417,531	419,487	441,893	446,562	8,821	8,635	8,373	10,847	10,495
H.C. 8	51,960	59,260	**64,535**	**64,312**	**64,855**	401,961	429,078	443,432	458,691	473,846	6,800	6,974	7,510	9,804	10,208
Veneto total	**104,320**	**116,360**	**120,485**	**123,077**	**123,473**	***813,795***	***846,609***	***862,919***	***900,584***	***920,408***	***15,621***	***15,609***	***15,883***	***20,651***	***20,703***
H.C. 9	47,438	47,483	47,204	44,143	44,651	299,822	303,994	305,869	306,399	310,592	6,889	6,739	6,794	6,431	6,875
H.C. 10	32,574	32,198	31,680	41,500	46,430	205,873	206,136	205,278	324,698	325,917	3,152	3,255	3,849	5,366	5,769
H.C. 11	68,374	67,884	68,736	68,392	68,800	432,141	434,604	445,392	457,158	464,286	7,393	6,805	7,103	7,846	7,267
H.C. 12	32,104	31,809	31,289	31,133	32,494	202,904	203,645	202,749	208,151	214,493	6,129	6,085	6,043	5,703	5,397
Emilia Romagna Total*	***180,490***	***179,374***	***178,909***	***185,168***	***192,375***	***1,140,740***	***1,148,379***	***1,159,288***	***1,296,406***	***1,315,288***	***23,563***	***22,884***	***23,789***	***25,346***	***25,308***
North Italy Total	***490,260***	***516,424***	***513,394***	***527,612***	***541,401***	***3,208,601***	***3,284,827***	***3,330,409***	***3,513,675***	***3,610,895***	***76,184***	***73,352***	***72,035***	***77,600***	***78,932***
H.C. 13	31,183	30,183	30,181	32,108	31,867	144,679	141,250	145,348	160,829	174,678	3,186	3,364	3,607	3,729	3,769
H.C. 14	47,919	46,053	46,122	47,939	48,026	260,532	257,758	271,644	281,848	298,289	4,422	4,318	4,437	4,441	4,543
Marche Total	**79,102**	**76,236**	**76,303**	**80,047**	**79,893**	***405,211***	***399,008***	***416,992***	***442,677***	***472,967***	***7,608***	***7,682***	***8,044***	***8,170***	***8,312***
H.C. 15	47,922	38,706	34,599	38,592	38,340	238,751	232,965	224,195	224,616	209,654	6,222	5,336	4,743	4,119	4,106
H.C. 16	23,227	21,884	19,783	19,684	21,720	115,718	131,718	128,192	128,269	126,890	3,370	3,179	2,980	2,720	2,780
H.C. 17	61,261	52,344	48,843	59,175	54,083	305,205	315,050	316,490	324,679	335,899	10,950	10,188	10,386	10,060	8,152
H.C. 18	26,600	22,793	21,177	21,071	22,137	132,524	137,186	140,622	148,428	156,660	4,464	4,168	4,146	3,784	4,260
H.C. 19	35,489	31,272	29,767	24,001	24,000	176,806	188,218	192,885	199,476	205,500	5,580	5,572	5,213	4,528	4,130
Lazio Total	**194,499**	**166,999**	**154,169**	**162,523**	**160,280**	**969,004**	**1,005,137**	**1,002,384**	**1,025,468**	**1,034,603**	**30,586**	**28,443**	**27,468**	**25,211**	**23,428**
Central Italy Total	***273,601***	***243,235***	***230,472***	***242,570***	***240,173***	***1,374,215***	***1,404,145***	***1,419,376***	***1,468,145***	***1,507,570***	***38,194***	***36,125***	***35,512***	***33,381***	***31,740***
H.C. 20	70,926	66,659	66,300	65,970	58,041	305,360	317,373	298,153	282,993	267,378	5,708	5,675	4,569	4,899	5,284
H.C. 21	38,194	36,511	36,200	36,020	35,739	164,439	173,831	162,790	171,709	165,123	2,806	2,793	2,437	2,657	2,858
Apulia total	***109,120***	***103,170***	***102,500***	***101,990***	***93,780***	***469,799***	***491,204***	***460,943***	***454,702***	***432,501***	***8,514***	***8,468***	***7,006***	***7,556***	***8,142***
H.C. 22	26,527	26,083	28,213	28,170	27,990	97,212	96,652	117,375	118,268	125,549	2,054	1,849	2,036	1,945	2,767
H.C. 23	25,989	25,746	24,277	24,160	23,850	95,238	95,405	101,520	110,625	111,850	2,332	2,451	2,510	2,338	2,479
H.C. 24	9,830	9,869	9,855	9,810	9,910	36,024	42,958	**46,927**	58,102	58,265	1,610	1,560	1,508	1,564	1,713
H.C. 25	25,554	25,022	23,556	23,450	23,750	93,643	92,720	**103,693**	111,982	127,776	1,694	1,695	1,502	1,387	1,495
Calabria Total	***87,900***	***86,720***	***85,901***	***85,590***	***85,500***	***322,117***	***327,735***	***369,515***	***398,977***	***423,440***	***7,690***	***7,555***	***7,556***	***7,234***	***8,454***
H.C. 26	21,525	20,377	22,009	21,243	20,536	113,251	121,004	121,030	131,098	130,198	1,380	1,366	1,404	1,554	1,459
H.C. 27	28,738	27,531	32,213	32,055	29,319	151,207	163,486	177,138	176,793	178,167	2,303	2,333	2,335	2,333	2,362
H.C. 28	40,938	39,860	44,207	43,986	42,359	215,396	236,698	243,093	238,783	249,016	3,979	3,944	3,917	3,586	3,473
H.C. 29	16,538	15,211	16,918	16,850	15,791	87,012	90,324	93,034	90,269	86,352	1,231	1,237	1,161	995	1,045
H.C. 30	23,380	23,242	26,679	26,552	32,792	123,015	138,017	146,708	144,996	152,279	2,466	2,479	2,371	2,296	2,345
H.C. 31	29,411	27,965	27,188	27,150	26,729	154,744	166,061	174,053	174,303	183,470	1,985	1,873	1,744	1,838	1,752
H.C. 32	30,527	27,117	31,202	31,055	28,550	160,615	161,024	171,581	167,388	177,908	1,890	1,749	1,736	1,633	1,517
H.C. 33	23,048	23,775	30,272	30,150	27,598	121,264	141,180	166,466	155,068	160,492	1,806	1,754	1,715	1,722	1,636
Sicily Total	***214,105***	***205,078***	***230,688***	***229,041***	***223,674***	**1,126,504**	**1,217,794**	**1,293,103**	**1,278,698**	**1,317,882**	**17,040**	**16,735**	**16,383**	**15,957**	**15,589**
South Italy Total	***411,125***	***394,968***	***419,089***	***416,621***	***402,954***	***1,918,420***	***2,036,733***	***2,123,561***	***2,132,377***	***2,173,823***	***33,244***	***32,758***	***30,945***	***30,747***	***32,185***
ITALY	***1,174,986***	***1,154,627***	***1,162,955***	***1,186,803***	***1,184,528***	***6,501,236***	***6,725,705***	***6,873,346***	***7,114,197***	***7,292,288***	***147,622***	***142,235***	***138,492***	***141,728***	***142,857***

./.

(Continued) *Table Appendix 1 – 2014-2018 comparison of the data relating to the Revenues and Costs items in the Income Statements of the Hospital Centers (in thousands of euros) **

Hospital Centers and University Hospital Centers (1)	Revenues for "by function" activities as per the IS (5)					Other revenues as per the IS (6)					Total Revenues as per the IS (7)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	31,600	34,500	40,908	41,647	45,163	8,909	10,756	11,843	14,590	5,881	147,155	155,520	163,793	164,981	168,849
H.C. 2	66,200	74,041	89,816	67,365	97,021	10,730	14,850	14,151	49,751	13,118	267,195	286,328	303,036	319,094	332,581
H.C. 3	48,500	49,400	53,977	55,340	53,734	7,249	9,277	7,714	7,555	4,515	229,850	238,529	246,055	249,153	255,655
H.C. 4	60,010	65,400	72,369	75,350	75,439	8,400	9,790	9,364	8,500	9,181	220,622	233,365	247,393	252,400	262,785
H.C. 5	42,438	42,360	51,755	46,076	50,654	3,023	5,331	5,342	8,473	- 3,130	168,936	171,079	185,272	187,502	176,887
H.C. 6	357,400	362,282	369,228	394,630	294,928	73,454	94,942	94,845	63,887	84,042	975,221	1,012,806	1,016,328	1,008,322	941,909
Piedmont Total	**606,148**	**627,983**	**678,053**	**680,408**	**616,939**	**111,765**	**144,946**	**143,259**	**152,756**	113,607	**2,008,979**	**2,097,627**	**2,161,877**	**2,181,452**	**2,138,666**
H.C. 7	138,893	136,414	165,421	120,010	111,750	- 6,708	17,972	- 11,858	32,525	45,018	552,840	580,552	581,423	605,275	613,825
H.C. 8	107,648	130,392	121,234	107,626	131,529	10,969	9,347	17,958	31,118	- 3,756	527,378	575,791	590,134	607,239	611,827
Veneto total	***246,541***	***266,806***	***286,655***	***227,636***	***243,279***	**4,261**	**27,319**	**6,100**	**63,643**	41,262	***1,080,218***	***1,156,343***	***1,171,557***	***1,212,514***	***1,225,652***
H.C. 9	62,711	58,155	58,978	63,145	71,374	12,199	17,145	15,817	14,260	15,853	381,621	386,033	387,458	390,235	404,694
H.C. 10	43,200	44,960	45,929	63,663	58,863	8,957	10,375	11,308	18,561	33,690	261,182	264,726	266,364	412,288	424,239
H.C. 11	89,465	91,752	97,560	103,694	100,959	29,029	48,284	29,688	29,095	48,252	558,028	581,445	579,743	597,793	620,764
H.C. 12	77,290	85,221	73,050	70,575	71,417	21,445	25,967	28,387	26,430	27,725	307,768	320,918	310,229	310,859	319,032
Emilia Romagna Total**	***272,666***	***280,088***	***275,517***	***237,932***	***302,613***	**71,630**	**101,771**	**85,200**	**88,346**	**125,520**	***1,508,599***	***1,553,122***	***1,842,351***	***1,711,175***	***1,768,729***
North Italy Total	***1,125,355***	***1,174,877***	***1,240,225***	***1,145,976***	***1,162,831***	***187,656***	***274,036***	***234,559***	***304,745***	***280,389***	***4,597,796***	***4,807,092***	***5,175,785***	***5,105,141***	***5,133,047***
H.C. 13	**66,451**	**62,730**	**72,419**	**71,190**	**45,344**	3,514	11,438	173	- 3,929	11,692	217,830	218,782	221,547	231,819	235,483
H.C. 14	**91,200**	**102,162**	**94,570**	**88,831**	**74,503**	20,208	18,638	10,794	13,453	18,451	376,362	382,876	381,445	388,573	395,786
Marche Total	***157,651***	***164,892***	***166,989***	***160,021***	***119,847***	**23,722**	**30,076**	**10,967**	**9,524**	**30,143**	***594,192***	***601,658***	***602,992***	***620,392***	***631,269***
H.C. 15	69,985	53,605	46,153	49,027	52,080	15,140	18,058	15,875	15,399	38,404	330,098	309,964	290,966	293,161	304,244
H.C. 16	30,429	20,918	17,432	16,244	17,150	17,360	20,947	29,177	15,534	38,131	166,877	176,762	177,781	162,767	184,951
H.C. 17	106,828	85,192	81,914	81,444	85,428	29,370	30,508	38,406	24,373	26,674	452,353	440,938	447,196	440,556	456,153
H.C. 18	23,952	20,043	18,632	18,618	25,684	14,761	14,351	13,984	20,361	13,024	175,701	175,748	177,384	191,191	199,628
H.C. 19	35,118	34,016	33,981	38,947	40,050	7,426	9,887	8,324	8,975	5,120	224,930	237,693	240,403	251,926	254,800
Lazio Total	**266,312**	**213,774**	**198,112**	**204,280**	**220,392**	**84,057**	**93,751**	**105,766**	**84,642**	**121,353**	**1,349,959**	**1,341,105**	**1,333,730**	**1,339,601**	**1,399,776**
Central Italy Total	***423,963***	***378,666***	***365,101***	***364,301***	***340,239***	***107,779***	***123,827***	***116,733***	***94,166***	***151,496***	***1,944,151***	***1,942,763***	***1,936,722***	***1,959,993***	***2,031,045***
H.C. 20	**188,356**	**156,616**	**155,241**	**160,050**	**152,643**	1,858	- 3,591	7,969	23,895	31,489	501,282	476,073	465,932	471,837	456,794
H.C. 21	**81,625**	**73,454**	**73,154**	**78,004**	**70,138**	2,975	2,871	7,642	7,375	8,964	251,845	252,949	246,023	259,745	247,083
Apulia total	***269,981***	***230,070***	***228,395***	***238,054***	***222,781***	**4,833**	**- 720**	**15,611**	**31,270**	**40,453**	***753,127***	***729,022***	***711,955***	***731,582***	***703,877***
H.C. 22	**83,950**	87,790	66,398	**72,140**	**60,264**	5,549	4,765	4,330	4,280	7,917	188,765	191,056	190,139	196,633	196,497
H.C. 23	**66,200**	66,222	58,416	43,626	43,626	6,454	12,201	6,109	5,438	3,466	170,224	176,279	168,555	162,027	161,421
H.C. 24	**14,349**	444	22,888	17,594	17,594	5,969	9,588	4,996	6,952	6,364	57,952	54,550	76,319	84,212	83,936
H.C. 25	**63,996**	58,681	58,579	59,323	49,689	8,886	12,708	6,822	5,760	7,475	168,219	165,804	**170,596**	**178,452**	**186,435**
Calabria Total	***228,495***	***213,137***	***206,281***	***192,683***	***171,173***	**26,858**	**39,262**	**22,257**	**22,430**	**25,222**	***585,160***	***587,689***	***605,609***	***621,324***	***628,289***
H.C. 26	67,730	67,494	67,685	58,646	56,821	11,715	5,580	10,539	8,203	11,479	194,076	195,444	200,658	199,501	199,957
H.C. 27	80,684	74,643	75,078	74,559	76,706	4,172	8,629	2,739	10,125	9,890	238,366	249,091	257,290	263,810	267,125
H.C. 28	139,702	145,198	142,094	128,190	132,712	32,415	19,009	14,562	16,383	40,637	391,492	404,849	403,666	386,942	425,838
H.C. 29	103,931	88,302	79,646	65,797	62,287	5,524	3,641	7,606	11,621	13,918	197,698	183,504	181,447	168,682	163,602
H.C. 30	57,620	54,844	54,525	61,581	73,327	5,042	3,505	6,174	3,837	4,426	188,143	198,845	209,778	212,710	232,377
H.C. 31	131,790	122,478	109,141	106,019	116,767	5,403	4,157	8,624	18,710	17,018	293,922	294,569	293,562	300,870	319,007
H.C. 32	167,800	165,573	149,380	130,427	153,134	19,446	20,861	36,929	39,298	25,102	349,751	349,207	359,626	338,746	357,661
H.C. 33	93,812	92,770	79,042	78,493	80,718	- 4,203	- 2,576	8,459	7,017	9,401	212,679	233,128	255,682	242,300	252,247
Sicily Total	**843,069**	**811,302**	**756,591**	**703,712**	**752,472**	**79,514**	**62,806**	**95,632**	**115,194**	**131,871**	**2,066,127**	**2,108,637**	**2,161,709**	**2,113,561**	**2,217,814**
South Italy Total	***1,341,545***	***1,254,509***	***1,191,267***	***1,134,449***	***1,146,426***	***111,205***	***101,348***	***133,500***	***168,894***	***197,546***	***3,404,414***	***3,425,348***	***3,479,273***	***3,466,467***	***3,549,980***
ITALY	***2,890,863***	***2,808,052***	***2,796,593***	***2,644,726***	***2,649,496***	***406,640***	***499,211***	***484,792***	***567,805***	***629,431***	***9,946,361***	***10,175,203***	***10,591,780***	***10,531,601***	***10,714,072***

./.

(Continued) *Table Appendix 1 – 2014-2018 comparison of the data relating to the Revenues and Costs items in the Income Statements of the Hospital Centers (in thousands of euros) **

Hospital Centers and University Hospital Centers (1)	Cost for the Purchase of Goods as per the IS (8)					Cost for the Purchase of Non-Health Services as per the IS (9)					Personnel costs as the IS (10)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	45,969	51,422	55,241	57,241	61,256	13,188	11,200	11,094	10,499	11,586	68,937	68,500	68,242	66,571	68,433
H.C. 2	64,774	74,082	76,095	78,570	85,724	25,817	26,899	27,121	28,120	27,987	124,323	130,325	131,059	133,700	137,482
H.C. 3	57,513	60,922	64,109	65,142	71,931	23,247	23,804	25,232	27,375	27,982	116,958	118,070	117,977	118,078	120,267
H.C. 4	52,129	55,272	61,916	63,900	68,860	24,569	23,655	23,471	24,100	25,993	108,828	112,093	113,350	113,150	117,297
H.C. 5	37,781	40,423	42,051	44,735	45,025	16,597	16,599	16,768	17,396	25,249	91,428	91,455	91,255	91,112	93,734
H.C. 6	209,926	230,646	229,825	237,212	250,906	80,845	78,423	75,484	71,398	70,917	473,869	476,016	469,123	467,466	475,758
Piedmont Total	**468,092**	**512,767**	**529,237**	**546,800**	**583,702**	**184,263**	**180,580**	**179,170**	**178,888**	**189,714**	**984,343**	**996,459**	**991,006**	**990,077**	**1,012,971**
H.C. 7	180,174	204,019	200,265	210,030	214,402	60,575	60,297	54,561	52,588	53,272	203,814	208,069	209,295	210,304	214,789
H.C. 8	145,114	174,411	172,379	186,165	189,677	69,925	67,850	63,866	62,902	61,141	220,412	219,722	222,050	221,148	223,719
Veneto total	***325,288***	***378,430***	***372,644***	***396,195***	***404,079***	***130,500***	***128,147***	***118,427***	***115,490***	***114,413***	***424,226***	***427,791***	***431,345***	***431,452***	***438,508***
H.C. 9	90,865	87,417	93,791	99,682	111,471	44,653	43,155	38,961	38,451	37,683	167,288	169,137	170,411	171,193	176,035
H.C. 10	54,987	58,822	60,574	102,295	101,645	31,950	30,996	27,073	57,527	62,478	110,715	111,171	111,411	112,214	115,517
H.C. 11	135,059	174,518	164,324	177,786	196,587	53,019	51,089	57,562	57,706	55,810	222,428	217,790	215,994	222,659	229,945
H.C. 12	60,468	69,659	66,769	69,822	76,848	47,169	46,543	44,684	40,817	46,832	124,263	123,733	12,203	123,843	125,724
Emilia Romagna Total**	***341,379***	***390,416***	***385,458***	***449,585***	***486,551***	***176,791***	***171,783***	***168,280***	***194,501***	***202,803***	***624,694***	***621,831***	***510,019***	***629,909***	***647,221***
North Italy Total	***1,134,759***	***1,281,613***	***1,287,339***	***1,392,580***	***1,474,332***	***491,554***	***480,510***	***465,877***	***488,879***	***506,930***	***2,033,263***	***2,046,081***	***1,932,370***	***2,051,438***	***2,098,700***
H.C. 13	54,593	57,104	58,368	65,235	68,065	23,028	23,162	22,406	24,418	24,860	102,813	100,746	101,551	103,301	104,930
H.C. 14	108,958	122,782	120,650	126,471	137,065	24,831	23,369	23,471	22,306	21,901	161,704	159,555	161,828	166,898	172,399
Marche Total	***163,551***	***179,886***	***179,018***	***191,706***	***205,130***	***47,859***	***46,531***	***45,877***	***46,724***	***46,761***	***264,517***	***260,301***	***263,379***	***270,199***	***277,329***
H.C. 15	86,638	84,898	81,706	74,813	82,016	45,364	41,604	35,671	34,493	34,629	236,001	232,783	231,558	226,686	226,611
H.C. 16	38,729	43,674	45,850	48,172	55,220	28,036	30,036	28,705	28,169	25,460	123,966	122,989	123,684	122,805	124,018
H.C. 17	170,228	181,357	177,454	189,812	183,018	69,566	65,115	70,198	77,214	63,283	116,237	123,581	142,486	141,307	146,019
H.C. 18	62,116	60,353	62,234	72,944	83,812	33,210	32,955	25,706	24,162	24,802	89,507	90,359	90,553	90,197	91,106
H.C. 19	106,257	104,687	97,605	98,621	101,700	34,869	32,777	33,014	34,251	33,950	51,521	51,892	55,048	58,782	59,055
Lazio Total	**463,968**	**474,969**	**464,849**	**484,362**	**505,766**	**211,045**	**202,487**	**193,294**	**198,289**	**182,124**	**617,232**	**621,604**	**643,329**	**639,777**	**646,809**
Central Italy Total	***627,519***	***654,855***	***643,867***	***676,068***	***710,896***	***258,904***	***249,018***	***239,171***	***245,013***	***228,885***	***881,749***	***881,905***	***906,708***	***909,976***	***924,138***
H.C. 20	152,227	175,965	152,259	131,792	139,200	56,000	55,787	53,795	56,674	54,539	193,159	197,474	194,126	194,362	195,676
H.C. 21	78,259	82,473	74,060	80,436	70,035	27,751	27,667	26,114	28,088	27,733	108,993	109,989	111,581	112,148	114,682
Apulia total	***230,486***	***258,438***	***226,319***	***212,228***	***209,235***	***83,751***	***83,454***	***79,909***	***84,762***	***82,272***	***302,152***	***307,463***	***305,707***	***306,510***	***310,358***
H.C. 22	37,379	40,174	41,988	44,311	48,072	25,728	26,232	27,362	27,170	26,468	102,133	101,131	100,768	101,621	101,159
H.C. 23	32,756	37,857	36,442	38,300	41,562	21,752	21,978	22,155	20,827	21,152	91,855	92,167	92,110	96,822	99,334
H.C. 24	22,286	22,540	23,150	32,502	37,872	7,248	7,150	6,988	7,935	7,935	32,281	32,455	32,015	38,050	39,623
H.C. 25	39,966	39,705	41,773	47,626	54,692	16,676	15,726	16,056	17,409	17,922	82,873	81,080	83,613	87,816	89,528
Calabria Total	***132,387***	***140,276***	***143,353***	***162,739***	***182,198***	***71,404***	***71,086***	***72,561***	***73,341***	***73,477***	***309,142***	***306,833***	***308,506***	***324,309***	***329,644***
H.C. 26	44,904	47,546	50,062	54,008	56,727	21,458	21,345	21,339	20,149	21,768	83,149	83,514	82,904	83,793	85,260
H.C. 27	56,307	68,120	69,107	71,428	76,531	17,457	16,890	16,472	17,907	19,336	113,964	113,706	114,625	118,696	120,310
H.C. 28	116,388	139,112	139,517	138,094	150,865	28,315	26,611	27,696	28,383	31,077	151,990	149,678	149,251	151,313	153,565
H.C. 29	32,779	35,358	35,998	38,328	38,770	14,171	12,865	13,256	13,860	14,526	96,926	92,886	86,392	77,257	77,311
H.C. 30	43,988	58,936	57,888	63,248	74,333	20,430	18,338	18,865	22,030	23,665	87,751	89,983	90,339	66,030	77,026
H.C. 31	73,519	81,139	78,493	85,622	87,748	24,549	24,050	24,766	24,526	25,510	140,907	141,391	140,780	141,710	142,838
H.C. 32	76,283	75,215	80,939	78,063	85,576	24,950	23,617	19,254	18,243	17,926	161,480	158,094	154,749	155,264	157,334
H.C. 33	62,848	83,827	87,994	79,596	81,307	13,067	14,543	15,451	14,121	15,856	60,096	61,179	62,852	63,533	64,731
Sicily Total	**507,016**	**589,253**	**599,998**	**608,387**	**651,857**	**164,397**	**158,259**	**157,099**	**159,219**	**169,664**	**896,263**	**890,431**	**881,892**	**857,596**	**878,375**
South Italy Total	***869,889***	***987,967***	***969,670***	***983,354***	***1,043,290***	***319,552***	***312,799***	***309,569***	***317,322***	***325,413***	***1,507,557***	***1,504,727***	***1,496,105***	***1,488,415***	***1,518,377***
ITALY	***2,632,167***	***2,924,435***	***2,900,876***	***3,052,002***	***3,228,518***	***1,070,010***	***1,042,327***	***1,014,617***	***1,051,214***	***1,061,228***	***4,422,569***	***4,432,713***	***4,335,183***	***4,449,829***	***4,541,215***

./.

(Continued) *Table Appendix 1 – 2014-2018 comparison of the data relating to the Revenues and Costs items in the Income Statements of the Hospital Centers (in thousands of euros) **

Hospital Centers and University Hospital Centers (1)	Provisions as per the IS (11)					Other Costs as per the IS (12)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	306	350	472	2,337	570	24,951	24,078	23,529	23,167	25,001
H.C. 2	593	1,906	300	4,137	5,948	55,472	58,841	63,168	76,653	66,799
H.C. 3	142	169	849	1,628	1,643	28,722	26,975	27,634	28,493	27,458
H.C. 4	645	1,486	1,301	1,120	1,209	36,211	39,278	36,888	35,230	43,000
H.C. 5	679	2,129	1,958	1,504	1,389	23,111	26,420	26,716	27,896	9,199
H.C. 6	13,853	12,236	15,124	20,062	22,737	204,449	200,390	206,214	205,000	216,080
Piedmont Total	**16,218**	**18,276**	**20,004**	**30,788**	**33,496**	372,916	375,982	384,149	396,439	387,537
H.C. 7	18,020	10,763	12,781	15,445	15,267	98,716	96,835	98,058	99,209	103,318
H.C. 8	4,741	7,694	17,586	17,776	20,864	74,354	86,775	95,171	99,280	98,143
Veneto total	***22,761***	***18,457***	***30,367***	***33,221***	***36,131***	***173,070***	***183,610***	***193,229***	***198,489***	***201,461***
H.C. 9	2,622	5,180	8,489	4,831	6,657	65,258	70,544	64,036	64,117	66,859
H.C. 10	3,325	5,346	10,407	9,139	9,498	52,335	50,363	48,972	123,848	129,624
H.C. 11	28,078	21,082	11,648	10,251	8,044	109,213	110,857	122,452	117,318	119,894
H.C. 12	2,587	4,539	4,935	4,671	6,481	63,570	62,488	172,500	64,599	56,624
Emilia Romagna Total**	***36,612***	***36,147***	***35,479***	***28,892***	***30,680***	***290,376***	***294,252***	***407,960***	***369,882***	***373,001***
North Italy Total	***75,591***	***72,880***	***85,850***	***92,901***	***100,307***	***836,362***	***853,844***	***985,338***	***964,810***	***961,999***
H.C. 13	7,983	7,494	9,630	7,934	3,426	23,941	23,682	23,441	24,182	27,070
H.C. 14	11,352	9,009	8,415	9,402	9,712	58,639	56,715	57,921	57,164	59,432
Marche Total	***19,335***	***16,503***	***18,045***	***17,336***	***13,138***	***82,580***	***80,397***	***81,362***	***81,346***	***86,502***
H.C. 15	10,873	7,486	16,580	15,980	10,258	87,508	76,387	65,353	60,806	59,720
H.C. 16	10,544	17,863	6,455	9,246	8,880	35,163	43,305	42,627	23,216	36,640
H.C. 17	46,443	37,404	40,816	12,488	10,823	124,487	125,606	130,571	118,127	127,168
H.C. 18	6,720	6,462	7,483	8,176	6,663	33,965	37,064	34,093	31,719	26,530
H.C. 19	7,109	9,830	10,640	6,401	5,900	82,692	77,907	71,573	62,988	63,660
Lazio Total	**81,689**	**79,045**	**81,974**	**52,291**	**42,524**	**363,815**	**360,269**	**344,217**	**296,856**	**313,718**
Central Italy Total	***101,024***	***95,548***	***100,019***	***69,627***	***55,662***	***446,395***	***440,666***	***425,579***	***378,202***	***400,220***
H.C. 20	14,375	2,014	3,099	8,852	12,619	63,037	60,617	70,429	70,985	81,006
H.C. 21	5,518	4,876	3,753	6,004	7,591	20,590	20,363	22,416	23,856	19,803
Apulia total	***19,893***	***6,890***	***6,852***	***14,856***	***20,210***	***83,627***	***80,980***	***92,845***	***94,841***	***100,809***
H.C. 22	6,403	6,873	4,096	4,982	4,685	12,275	14,466	14,858	13,264	11,554
H.C. 23	1,250	1,289	1,315	1,505	2,079	14,481	15,356	18,250	18,734	14,457
H.C. 24	2,280	2,295	2,850	551	773	9783	14,747	27,016	14,239	11,323
H.C. 25	2,943	3,314	2,545	1,903	2,075	18,438	18,705	19,483	19,914	18,760
Calabria Total	***12,876***	***13,771***	***10,806***	***8,941***	***9,612***	***54,977***	***63,274***	***79,607***	***66,151***	***56,094***
H.C. 26	9,047	8,994	15,268	7,801	5,012	25,011	26,597	25,819	27,343	27,399
H.C. 27	10,758	10,026	10,218	7,039	4,940	28,127	29,951	38,611	40,904	38,579
H.C. 28	12,851	17,167	18,468	16,483	7,514	66,025	60,643	54,748	43,943	76,654
H.C. 29	11,283	10,825	17,986	8,837	5,366	28,389	23,549	25,395	23,999	22,314
H.C. 30	8,131	6,010	8,835	4,694	9,155	19,480	18,052	27,412	49,867	41,099
H.C. 31	8,714	12,737	8,353	7,814	12,297	27,185	23,732	32,002	32,871	37,876
H.C. 32	18,689	23,436	31,623	15,041	16,288	52,845	56,535	61,663	60,262	71,275
H.C. 33	3,277	3,708	4,269	3,678	4,232	62,341	60,564	75,464	73,624	77,061
Sicily Total	**82,750**	**92,903**	**115,020**	**71,387**	**64,804**	**309,403**	**299,623**	**341,114**	**352,813**	**392,257**
South Italy Total	***115,519***	***113,564***	***132,678***	***95,184***	***94,626***	***448,007***	***443,877***	***513,566***	***513,805***	***549,160***
ITALY	***292,134***	***281,992***	***318,547***	***257,712***	***250,595***	***1,730,764***	***1,738,387***	***1,924,483***	***1,856,817***	***1,911,379***

./.

(Continued) *Table Appendix 1 – 2014-2018 comparison of the data relating to the Revenues and Costs items in the Income Statements of the Hospital Centers (in thousands of euros) **

Hospital Centers and University Hospital Centers (1)	Total costs as per the IS (13)					Operating Results as per the IS (14)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
H.C. 1	153,351	155,550	158,578	159,815	166,846	-10,147	- 7,716	0	1,926	0
H.C. 2	270,979	292,053	297,743	321,180	323,940	- 12,852	- 18,864	- 6,428	- 2,406	-
H.C. 3	226,582	229,940	235,801	240,716	249,281	-5,619	-	0	-	**1,156**
H.C. 4	222,382	231,784	236,926	237,500	256,359	- 5,737	- 4,486	-	**1,180**	-
H.C. 5	169,596	177,026	178,748	182,643	174,596	-8,432	- 6,568	-	**- 1,495**	**- 3,818**
H.C. 6	982,942	997,711	995,770	1,001,138	1,036,398	- 30,648	- 15,081	- 11,040	-17,478	-120,997
Piedmont Total	**2,025,832**	**2,084,064**	**2,103,566**	**2,142,992**	**2,207,420**	**- 73,435**	**- 52,715**	**- 17,468**	**- 18,273**	**- 123,659**
H.C. 7	561,299	579,983	574,960	587,576	601,048	- 22,835	- 17,047	- 10,491	-	-
H.C. 8	514,546	556,452	571,052	587,271	593,544	- 13,451	1,000	-	-	-
Veneto total	***1,075,845***	***1,136,435***	***1,146,012***	***1,174,847***	***1,194,592***	***- 36,286***	***- 17,047***	***- 10,491***	-	
H.C. 9	370,686	375,433	375,688	378,274	398,705	0	0	0	0	0
H.C. 10	253,312	256,698	258,437	405,023	418,762	0	0	0	0	0
H.C. 11	547,797	575,336	571,980	585,720	610,280	0	0	0	0	0
H.C. 12	298,057	306,962	301,091	303,752	312,509	0	0	0	0	0
Emilia Romagna Total**	***1,469,852***	***1,514,429***	***1,507,196***	***1,672,769***	***1,740,256***	-	-	-	-	
North Italy Total	***4,571,529***	***4,734,928***	***4,756,774***	***4,990,608***	***5,142,268***	***- 109,721***	***- 69,762***	***- 27,959***	***- 18,273***	***- 123,659***
H.C. 13	212,358	212,188	215,396	225,070	228,351	0	0	0	0	0
H.C. 14	365,484	371,430	372,285	382,241	400,509	0	0	0	-	-
Marche Total	***577,842***	***583,618***	***587,681***	***607,311***	***628,860***		-	-	-	-
H.C. 15	466,384	443,158	430,868	412,778	413,234	- 158,632	- 161,799	- 155,718	- 130,712	- 116,314
H.C. 16	236,438	257,867	247,321	231,608	250,218	- 102,291	- 98,853	- 81,733	- 83,599	- 77,401
H.C. 17	526,961	533,063	561,525	538,948	530,311	- 74,610	- 92,543	- 140,252	- 104,166	- 87,743
H.C. 18	225,518	227,193	220,069	227,198	232,913	- 53,708	- 54,160	- 49,108	- 41,510	- 40,432
H.C. 19	282,448	277,093	267,880	261,043	264,265	- 73,601	- 62,567	- 41,794	- 24,902	- 19,500
Lazio Total	**1,737,749**	**1,738,374**	**1,727,663**	**1,671,575**	**1,690,941**	**- 462,842**	**- 469,922**	**- 468,605**	**- 384,889**	**- 341,390**
Central Italy Total	***2,315,591***	***2,321,992***	***2,315,344***	***2,278,886***	***2,319,801***	***- 462,842***	***- 469,922***	***- 468,605***	***- 384,889***	***- 341,390***
H.C. 20	478,798	491,857	473,708	462,665	483,040	0	-28102	-19736	-9740	-41114
H.C. 21	241,111	245,368	237,924	250,532	239,844	0	0	0	-	-
Apulia total	***719,909***	***737,225***	***711,632***	***713,197***	***722,884***	***0***	***- 28,102***	***- 19,736***	***- 9,740***	***- 41,114***
H.C. 22	183,918	188,876	189,072	191,348	191,938	-6007	-1880	0	0	0
H.C. 23	162,094	168,647	170,272	176,188	178,584	-3764	-2265	0	**- 12,930**	**- 27,743**
H.C. 24	73,878	79,187	92,019	93,277	97,526	***-14562***	***- 29,858***	***- 42,000***	***- 12,319***	***- 20,942***
H.C. 25	160,896	158,530	163,470	174,668	182,977	-17377	-20279	0	-	-
Calabria Total	***580,786***	***595,240***	***614,833***	***635,481***	***651,025***	**- 41,710**	**- 54,282**	**- 42,000**	**- 25,249**	**- 48,685**
H.C. 26	183,569	187,996	195,392	193,094	196,166	-	-	-	-	-
H.C. 27	226,613	238,693	249,033	255,974	259,696	-	-	-	-	-
H.C. 28	375,569	393,211	389,680	378,216	419,675	788	-	-	-	-
H.C. 29	183,548	175,483	179,027	162,281	158,287	-	-	-	-	-
H.C. 30	179,780	191,319	203,339	205,869	225,278	-	-	-	-	-
H.C. 31	274,874	283,049	284,394	292,543	306,269	2456	2680	0	-	-
H.C. 32	334,247	336,897	348,228	326,873	348,399	***0***	-	-	-	-
H.C. 33	201,629	223,821	246,030	234,552	243,187	2209	0	1120	-	**1,666**
Sicily Total	**1,959,829**	**2,030,469**	**2,095,123**	**2,049,402**	**2,156,957**	**5,453**	**2,680**	**1,120**	-	**1,666**
South Italy Total	***3,260,524***	***3,362,934***	***3,421,588***	***3,398,080***	***3,530,866***	***- 36,257***	***- 79,704***	***- 60,616***	***- 34,989***	***- 88,133***
ITALY	***10,147,644***	***10,419,854***	***10,493,706***	***10,667,574***	***10,992,935***	***- 608,820***	***- 619,388***	***- 557,180***	***- 438,151***	***- 553,182***

./.

NOTES

(*) The data from the Income Statements refers to the approved and published Financial Statements.

(**) It should be mentioned that transformations took place in two Hospital Centers: in one case a Hospital Center became part of the AUSL in 2016 and in another case, a joint organizational plan was activated between a Hospital Center and a smaller hospital in the year 2017. It is clear that this entails limits with regard to the five-year comparison, and it must be kept in mind that the data may have experienced an upward "spike".

1 Between the Hospital Centers and the University Hospital Centers, two "intertwining" phenomena should be mentioned, which concern 1 Emilia Romagna Hospital Center which became part of the corresponding AUSL (in 2016) and a second University Hospital Center which has been involved in a joint organizational plan since 2017 together with a smaller hospital (therefore the data cannot be compared over several years).

2 The number of ordinary hospitalizations and *day hospital* admissions have been partially rounded.

3 The Total of health and social and healthcare services with health relevance refers to Code A00320.

4 Revenues from expense sharing (Co-payment charges) refer to Code A0940.

5 Revenues from transfers for "By-function activities" refer to Code A0030.

6 Other Revenues are the result of the difference between the total Revenues reported in the Income Statement on the basis of Code AZ999 and the sum of Revenues from health and social and healthcare services with health relevance + Revenues from co-payment charges + Revenues for "by-function" activities.

7 Total revenues show the value shown on the Income Statement as per Code AZ999.

8 The Purchase of goods refers to Code BA010.

9 The Purchase of non-healthcare services (mainly outsourced/contracted) refers to Code BA1570.

10 Employee costs refer to Code BA2080.

11 The Provisions refer to Code BA2690.

12 Other costs have been calculated as the difference between the Total costs (as per Code BZ999) and the sum of the Costs for the Purchase of goods + the Purchase of services + Personnel costs + related Provisions.

13 Total costs were reported as per Code BZ999.

14 The Operating result has been reported as per Code ZZ999.

Source: *Survey by Ermeneia – Studi & Strategie di Sistema, 2019*

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. 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 3.3 of Part One of this Report.

The second method used was that of field surveys on nationally representative samples: the first turned to the adult population from 18 years and older, and the second took into consideration the *caregivers* that is, that member of the family responsible for making decisions and providing concrete support in the health and social-assistance field, both for themselves, as the *caregivers,* and members of their family.

The first survey was based primarily on a *set* of questions that measured the change over the years in the knowledge, behaviors, opinions and assessments among both actual users of hospital services over the past twelve months and citizens as a whole.

The topics concerned the methods of access to these services, awareness of the possible alternatives of hospitalization among public and accredited facilities (at no cost to the patient), the perceived quality of the services, as well as the overall opinion of the mixed hospital system that characterizes Italy. All of this took into account the different types of existing hospitalization facilities, namely public hospitals, accredited hospitals and paid private clinics.

For this purpose the usual questionnaire was administered, and included (in the first Section):

a) questions directed at users of hospital services, specific to:
   - the type of hospital service used;
   - the type of hospital visited (public, accredited, 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 in the last time this happened;

- and on the level of "loyalty", that is, on the propensity to use the same hospital facility used the last time;

b) 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 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 EU Directive 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;
   - positive/negative opinions about Italian hospitals, with reference to the three types of hospitals: public, accredited and private clinics;
   - the evaluation of some statements concerning the importance of the mixed public-accredited system as an integrated system in all respects and as to what might – among other things – require more precise information relating to the National Health Service;
   - the willingness of the respondent to ideally take on some additional costs in order to have more choices than are currently available.

A Section has been added to this first section of the questionnaire this year, primarily dedicated to monitoring the progress of the experiences of waiting lists and access to the Emergency Room, again with reference to the last twelve months. More precisely, the questions concerned:

- whether or not they had had experiences with waiting lists for local health authority services, the type of illness they had, the type of services they were interested in, the length of the relative waiting lists, the behaviors implemented (patiently waiting their turn or seeking alternative solutions);
- whether or not they had had experiences over the past twelve months with waiting lists for actual inpatient admission for either serious or minor sur-

gery and/or care, with the relative duration and the behaviors adopted (waiting patiently or looking for alternatives);
- and whether or not they had experiences with accessing the Emergency Room, the reasons that led them to use this service, the length of the wait to obtain services, how they were treated and the overall satisfaction rating with respect to the Emergency Room used;
- and finally, the propensity of the population, in the presence of a serious and/or urgent health problem (or one deemed such), to use the Emergency Room service as an "alternative" to the territorial services and the length of the waiting lists.

Further questions were then asked – again in the second Section – aimed at broadening the assessment of the waiting lists, but this time with reference to *day hospital* and *day service* (outpatient medical treatment) and *day service* (outpatient surgery), and the relative behaviors adopted by the respondents (patiently waiting or seeking for alternatives); any costs incurred through co-payment or medical referral charges or other expenses were also recorded, ending with asking whether the respondent felt like he/she had or had not been the center of attention as a patient, to which was added a question relating to the overall satisfaction/dissatisfaction with the services just mentioned.

Finally, respondents were asked about their experiences with hospital admissions (minor surgery, serious surgery, slight illness or serious illness) or *day hospital* and *day service* (outpatient medical treatment) or *day service* (outpatient surgery), ending with an opinion of satisfaction about the health and social-assistance services present in the respondent's Region, as well as specifically about the hospitals that operate there: taking into account the opinions of those who may or may not have had the opportunity to use these services in the past twelve months.

Thus the second Section of the questionnaire has, on the one hand, acted to monitor the trend of the demand for services through the waiting list mechanism and was extended to include *day hospital* and *day service* operations in order to better understand the "de-hospitalization" process that has been underway for some time.

The survey – carried out by means of a questionnaire – was conducted using a special panel (Telepanel) based on a representative sample of the Italian population of 2,000 families. The sample construction method was based on a proportional stratification of "sampling cells" in order to guarantee representativeness according to the main social-demographic variables of sex (2 levels), age (5 levels), education (4 levels), work status (8 levels), geographical distribution (7 levels), and size of the municipality of residence

(5 levels): for a total of 31 sampling cells. On the basis of the Istat 2016 demographic data, the number of adult Italians present in each of the aforementioned cells was determined both in absolute and percentage terms, with reference therefore to a population of 49,424,499 individuals (see Table App. 2).

The questionnaire was administered in September 2019, and 3,802 valid questionnaires were obtained, the numbers being subsequently adjusted by means of a specific weighting, referring to the social-demographic variables with which the sample was structured (see Table App. 2).

The sampling error, with a confidence interval of 95%, is equal to ± 1.59%.

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

The complete results of the survey can 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. 3 to App. 9.

Table Appendix 2 – Universe-sample comparison, with reference to the population survey (individuals aged 18 years and older)

Structural variables	*Universe*		*Raw respondents (2019)*		*Weighted respondents (2019)*	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*
GENDER						
Male	23,586,982	47.7	1,641	43.2	1,918	47.7
Female	25,837,517	52.3	2,161	56.8	2,102	52.3
Total	49,424,499	100.0	3,802	100.0	4,020	100.0
SIZE OF THE MUNICIPALITY						
Up to 5,000 inhabitants	8,664,530	17.5	539	14.2	703	17.5
5,001-20,000 inhabitants	14,827,458	30.0	972	25.6	1,210	30.1
20,001-50,000 inhabitants	9,207,758	18.6	734	19.3	748	18.6
50,001-100,000 inhabitants	5,239,541	10.6	541	14.2	426	10.6
100,000 inhabitants more	11,485,212	23.2	1,016	26.7	933	23.2
Total	49,424,499	100.0	3,802	100.0	4,020	100.0
NIELSEN REGION						
Piedmont+Liguria+Aosta Valley	5,150,039	10.4	480	12.6	418	10.4
Lombardy	8,065,824	16.3	815	21.4	656	16.3
Triveneto	5,901,062	11.9	409	10.8	479	11.9
Emilia Romagna	3,657,153	7.4	294	7.7	298	7.4
Tuscany+Marche+Umbria+Sardinia	6,548,538	13.2	497	13.1	531	13.2
Lazio	4,591,716	9.3	309	8.1	374	9.3
Abruzzo+Molise+Campania+Apulia	9,321,821	18.9	577	15.2	761	18.9
Sicily+Calabria+Basilicata	6,188,345	12.5	421	11.1	503	12.5
Total	49,424,499	100.0	3,802	100.0	4,020	100.0
EDUCATION						
No qualifications/Primary school	11,450,263	23.2	38	1.0	933	23.2
Lower secondary school certificate	17,545,950	35.5	424	11.2	1,427	35.5
Higher secondary school certificate	14,724,308	29.8	1,911	50.3	1,198	29.8
First cycle degree, Second cycle degree, Third cycle degree	5,703,978	11.5	1,429	37.6	462	11.5
Total	49,424,499	100.0	3,802	100.0	4,020	100.0
AGE RANGE						
18-24 years	4,240,198	8.6	135	3.6	346	8.6
25-34 years	7,057,113	14.3	461	12.1	575	14.3
35-44 years	9,360,064	18.9	980	25.8	760	18.9
45-54 years	8,915,288	18.0	1,069	28.1	724	18.0
55-64 years	7,467,295	15.1	659	17.3	607	15.1
>64 years	12,384,541	25.1	498	13.1	1,009	25.1
Total	49,424,499	100.0	3,802	100.0	4,020	100.0
OCCUPATION						
Self-employed	5,624,780	11.4	424	11.2	458	11.4
Employed	9,332,266	18.9	1,785	46.9	760	18.9
Laborer	7,602,018	15.4	185	4.9	619	15.4
Housewife	8,322,598	16.8	429	11.3	675	16.8
Pensioner	11,467,163	23.2	517	13.6	933	23.2
Job seekers	2,016,961	4.1	268	7.0	165	4.1
Other	5,058,713	10.2	194	5.1	410	10.2
Total	49,424,499	100.0	3,802	100.0	4,020	100.0

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 3 – Gender of the respondents (%)

Gender	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*	*2006*	*2005*
– Male	47.7	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	52.3	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	100.0
A.V.	4,020	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, 2019*

Table Appendix 4 – Age of the respondents (%)

Age range	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*	*2006*	*2005*
– 18-24 years	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.7	8.7	8.7	9.0	9.9	9.9
– 25-34 years	14.3	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	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	40,2	40,2	40,2	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	100.0
A.V.	4,020	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, 2019*

Table Appendix 5 – Distribution of respondents by residence (%)

Distribution	*2019*	*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	26.7	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	19.3	19.2	19.2	19.2	19.2	19.1
– Center	18.7	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	35.2	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	100.0
A.V.	4,020	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, 2019*

Table Appendix 6 – Distribution of respondents by size of town of residence (%)

Size	*2019*	*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	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	29.2	29.7	39.7	29.5	29.2	29.4	29.1	28.4	28.4
– 100,001 inhabitants and more	23.2	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	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
A.V.	4,020	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, 2019*

Table Appendix 7 – Occupation of the respondents (%)

Occupation	*2019*	*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	11.4	11.5	11.6	12.0	12.4	12.2	12.6	12.6	12.6
– Employed	18.9	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	15.4	16.2	16.2	16.4	15.9	15.7	15.6	15.6	-
– Housewife/Pensioner	40.0	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	4.1	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	10.2	12.1	10.2	10.2	10.2	10.2	10.2	9.0	9.0	9.7	9.7	10.0	9.0	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	100.0
A.V.	4,020	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, 2019*

Table Appendix 8 – Education of the respondents (%)

Qualification	*2019*	*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	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	35.5	35.4	35.0	34.6	34.5	36.3	36.3
– Higher secondary school certificate/First cycle degree, Second cycle degree, Third cycle degree	41,3	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
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	100.0
A.V.	4,020	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, 2019*

Table Appendix 9 – Estimated socioeconomic status of the respondents (%)

Status	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*	*2006*	*2005*
– Low/Low-Middle	47,3	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	44.8
– Middle	42.9	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	9,8	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
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	100.0
A.V.	4,020	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

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

The second survey concerns a sample of *caregivers* i.e. those members of the family that usually make decisions and provide concrete support in the health and social assistance field with regard to the choice of services, care, direct assistance (and identifying that provided by other parties), as well as the necessary paperwork for themselves, as the *caregivers,* and/or other family members.

The above survey traced the experiences in the hospital setting with regard to waiting lists for admissions as well as waiting lists for *day hospital* and *day service* outpatient medical and *day service* outpatient surgery services, to which were added any weaknesses of the "connection" systems upon admission to and during the stay at the hospital as well as upon discharge from the hospital and of any transition to post-hospital facilities: specific attention was given to the latter. The questionnaire was structured as follows:

- *Section 1 – Experiences in the hospital setting*, aimed primarily at recording hospitalization experiences for both serious and minor interventions/care, as well as for *day hospital* and *day service* services over the past twelve months; attention was also given to the issue of waiting lists and their length, as well as the related behaviors by the *caregivers* and/or other family members, also taking into account the type of facilities used (public hospitals, local health authorities, accredited hospitals, entirely paid private clinics); additionally, any costs incurred by the family such as co-payment or medical referral charges or other expenses were observed. Finally, an evaluation was requested, in particular, of the service used by the respondents;
- *Section 2 – Any weaknesses of the "connection" systems upon admission to and during the stay in the hospital* were examined in order to explore any difficulties faced by the actual users of the hospital facilities over the past twelve months with initially identifying the most appropriate facility for the patient and with relating to the various operators and the internal organization within the facility; the evaluation of the experience of the *caregivers* and/or other family members was collected in order to measure the "average level" of the services provided by the hospitals in the Region of the respondents. Moreover, the reactions of the *caregivers* (or other family members) were considered if they had experienced any inconvenience in public hospital facilities that led them to resort to accredited hospitals or paid private clinics: highlighting, also in this case, the specific reasons for this behavior. Subsequently, the propensity to use hospitals in other Regions compared to that of the respondent's home Region was ascertained, as well as the (theoretical) propensity to resort to

the Emergency Room in the event of a serious and/or urgent health problem. (or one deemed such), in order to shorten waits, obtain desired services or to be able to make use of trusted specialists, or to gain admission to hospital directly by going to the Emergency Room. And finally, questions relating to opinions of satisfaction/dissatisfaction with respect to health and social assistance services as well as with respect to the hospitals in the respondents' Region independent of whether they had the opportunity to use these services during the last twelve months;

– *Section 3 – Any weaknesses in the "connection" systems upon discharge from the hospital and the transition to post-hospital facilities*, aimed at specifically collecting information regarding any difficulties encountered with respect to the time of discharge from these facilities after a surgery and/or hospitalization for either serious or minor problems. Some questions were added concerning possible access, over the past three years, to rehabilitation, long-term care, assisted living homes or home care services: exploring the different types of rehabilitation used (cardiology, neurology, orthopedics) or intensive, intensive with high specialization, extensive and, finally, long-term). In parallel, respondents were also asked to state the level of information available about the presence or lack thereof in their home Region of the post-hospital facilities just mentioned and their adequacy both in terms of the quantity and quality of the services provided.

With reference to the latter type of facilities, the respondents were asked to assess their satisfaction/dissatisfaction with of the services used, collecting the reasons for any dissatisfaction as well as the propensity to resort to rehabilitation and/or long-term care facilities present in other Italian Regions compared to that of the home Region, again in this case specifying the reasons that motivated or that would motivate such a decision.

Finally, the respondents were asked to give their opinions about a series of proposals to improve the "connection" systems upon admission to and discharge from hospital facilities, including when moving to rehabilitation, long-term care or other facilities.

The above questionnaire was administered primarily via Telepanel (already referred to in the previous pages), and the 2,000 families were asked to identify their *caregiver* as the recipient of the questions contained in the aforementioned questionnaire.

The questionnaire was administered during the month of September 2019, and 1,738 valid questionnaires were obtained. The numbers of the actual respondents were subsequently adjusted by means of weighting according to

the social-demographic variables with which the sample was structured, thus attaining the result of 2,000 respondents shown in Table App. 10.

The sampling error for this database, with a confidence interval of 95%, is equal to ± 2.35%. As regards in particular the questions relating to the topics of rehabilitation, long-term care, assisted living home facilities and home care services, a special oversampling was carried out, complementary to that of the *caregiver* respondents via the Telepanel. This decision is linked to the fact that constructing a representative sample, for example for inpatient admissions for acute cases, is relatively easy since there are 6.3 million inpatient admissions. But this figure drops to 1/3 (1.9 million) if we refer to the total population of the *day hospital* acute cases, and – it goes down even further – if we include the topic of rehabilitation which has only 350,000 inpatient admissions per year (and 105,000 of these are long-term care admissions). As can be clearly understood, collecting more information to achieve minimally acceptable absolute response values can be done only by oversampling. This decision was also based on a short pilot survey carried out in July 2019 to better evaluate the answers that might be obtained – quantitatively speaking – from the panel of families on the issues of rehabilitation, long-term care, the use of assisted living home facilities and home care services.

The oversampling operation was carried out through the use of a Web Panel made up of specially selected *caregivers* who had experience with these services (personally or with other family members) in terms of inpatient admissions in the strict sense, *day hospital* or *day service* services and admissions to rehabilitation, long-term care, assisted living homes or home-based services, even if the focus was essentially on rehabilitation and long-term care. Yet, precisely because of the limited nature of the total population, the *caregiver* respondents were also asked to refer to a period exceeding that of the last twelve months, including the last three years.

Table Appendix 10 – Comparison between universe and sample (raw and weighted) of caregivers

Structural variables	*Universe*		*Raw respondents (2019)*		*Weighted respondents (2019)*	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*
GENDER						
Male	10,388,826	42.2	818	47.1	844	42.2
Female	14,229,245	57.8	920	52.9	1,156	57.8
Total	24,618,071	100.0	1,738	100.0	2,000	100.00
SIZE OF THE MUNICIPALITY						
Up to 5,000 inhabitants	4,354,501	17.7	254	14.6	354	17.7
5,001-20,000 inhabitants	7,212,374	29.3	446	25.7	586	29.3
20,001-50,000 inhabitants	4,455,426	18.1	338	19.4	362	18.1
50,001-100,000 inhabitants	2,555,100	10.4	260	15.0	208	10.4
100,000 inhabitants more	6,040,670	24.5	440	25.3	490	24.5
Total	24,618,071	100.0	1,738	100.0	2,000	100.00
NIELSEN REGION						
Piedmont+Liguria+Aosta Valley	2,764,609	11.2	216	12.4	224	11.2
Lombardy	4,167,840	16.9	285	16.4	338	16.9
Triveneto	2,964,016	12.0	179	10.3	240	12.0
Emilia Romagna	1,917,748	7.8	128	7.4	156	7.8
Tuscany+Marche+Umbria+Sardinia	3,239,738	13.2	242	13.9	264	13.2
Lazio	2,351,025	9.5	124	7.1	190	9.5
Abruzzo+Molise+Campania+Apulia	4,246,617	17.2	317	18.2	344	17.2
Sicily+Calabria+Basilicata	2,966,478	12.1	247	14.2	242	12.1
Total	24,618,071	100.0	1,738	100.0	2,000	100.00
EDUCATION						
No qualifications/Primary school	1,797,119	7.3	41	2.4	146	7.3
Lower secondary school certificate	4,431,253	18.0	288	16.6	360	18.0
Higher secondary school certificate	12,173,636	49.5	943	54.3	988	49.4
First cycle degree, Second cycle degree, Third cycle degree	6,216,063	25.3	466	26.8	506	25.3
Total	24,618,071	100.0	1,738	100.0	2,000	100.0
AGE RANGE						
18-24 years	196,945	0.8	112	6.4	16	0.8
25-34 years	2,387,953	9.7	148	8.5	194	9.7
35-44 years	5,982,191	24.3	341	19.6	486	24.3
45-54 years	5,268,267	21.4	466	26.8	428	21.4
55-64 years	4,825,142	19.6	343	19.7	392	19.6
>64 years	5,957,573	24.2	328	18.9	484	24.2
Total	24,618,071	100.0	1,738	100.0	2,000	100.0
OCCUPATION						
Self-employed	1,274,811	5.2	170	9.8	104	5.2
Employed	9,670,506	39.3	717	41.3	786	39.3
Laborer	2,027,113	8.2	103	5.9	164	8.2
Housewife	2,648,105	10.8	196	11.3	216	10.8
Pensioner	6,215,386	25.2	332	19.1	504	25.2
Job seekers	1,986,078	8.1	130	7.5	162	8.1
Other	796,073	3.2	90	5.2	64	3.2
Total	24,618,071	100.0	1,738	100.0	2,000	100.0

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

The oversampling survey was carried out in parallel with that of the Telepanel during the month of September 2019, and, following the appropriate administration, managed to collect 409 valid questionnaires.

Again in this case, the oversampling survey was checked and weighted according to the main social-demographic variables that characterize the profile of the *caregivers* or individuals who had experiences with of inpatient hospital admissions, *day hospital* and *day service* services, and/or rehabilitation and long-term care facilities.

The processing of the collected data was carried out on an overall sample of individuals-users equal to 839 individuals, taken from 430 cases originating from the Telepanel *caregiver* survey and 409 cases originating from oversampling via the Web panel.

The sampling error for this entire database, with a confidence interval of 95%, is equal to ± 3.38%.

This led to the creation of a sort of "mobile" database, as the Telepanel *caregiver* survey served:

– on the one hand, to identify the component that actually had specific experiences with waiting lists, access to admissions, access to *day hospital* and *day service* services, as well as rehabilitation and long-term care facilities;
– and, on the other hand, to stoke the overall Telepanel + Web sample when it came to exploring the behaviors and evaluations of the respondents who actually had the above experiences, "reactive" behaviors with respect to the latter, or the evaluations of the experiences.

The overall results of the survey conducted on *caregivers* and the relative comments are located in Part Three of this Report.

The social-personal profiles for the *caregiver* respondents are given in the tables 11-18.

Finally, a third method was used for the preparation of 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 Appendix 11 – Position of the caregivers *interviewed within their own family (%)**

Response	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– Wife (or female partner)	41.0	34.0	38.0	39.6	34.9	24.6	43.2
– Husband (or male partner)	31.1	36.9	35.6	36.0	24.9	38.3	25.6
– Sole family member (female)	5.2	6.7	6.9	6.5	13.8	6.4	{ 21.6
– Sole family member (male)	3.2	3.1	3.3	3.4	12.9	2.9	
– Son	7.9	3.4	2.5	1.4	3.0	-	2.4
– Daughter	5.4	9.6	7.6	8.7	4.4	0.1	3.9
– Co-habiting sister (of husband or wife)	0.1	0.3	0.2	0.3	0.4	0.9	0.1
– Co-habiting brother (of husband or wife)	0.1	0.2	0.1	-	0.3	0.4	0.1
– Other co-habiting relative (man)	2.6	1.2	0.5	0.5	0.5	0.1	0.3
– Other co-habiting relative (woman)	0.9	1.9	2.8	1.2	2.9	0.2	1.1
– Other person not related, but co-habiting (man)	0.5	0.6	0.4	0.2	0.2	24.6	0.7
– Other person not related, but co-habiting (woman)	0.6	0.5	0.2	0.3	0.2	1.5	0.7
– Other	1.4	1.6	1.9	1.9	1.6	-	0.3
Total	100.0	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	2,000

(*) Data obtained using Telepanel Sample.
Source: *Survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 12 – Gender of the caregiver *(%)*

Gender	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– Male	42.2	42.2	42.2	42.2	42.2	39.0	37.6
– Female	57.8	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	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 13 – Age-group of the caregivers (%)

Age range	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– 18-34 years	10,5	10,5	10,5	10,5	10,5	9.5	10,3
– 35-54 years	45,7	45,7	45,7	45,7	45,7	41.6	41.8
– ≥ 55 years	43,8	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	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 14 – Geographical distribution of caregivers (%)

Distribution	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– North-West	28.6	28.1	28.1	28.1	28.2	28.2	28.2
– North-East	20.1	19.8	19.8	19.8	19.8	19.8	19.8
– Center	19.4	19.2	19.1	20.2	19.4	18.7	18.8
– South and Islands	31.8	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	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 15 – Distribution of caregivers by size of town of residence (%)

Size	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– Up to 20,000 inhabitants	47.0	47.0	47.0	47,0	47,0	47.0	47.0
– 20,001 to 100,000 inhabitants	28.5	28.5	28.5	28.5	28.5	28.5	28.5
– 100,001 inhabitants and more	24.5	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	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 16 – Occupational activity of the caregiver *(%)*

Occupation	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– Self-employed	5.2	5.2	5.2	5.2	14.7	11.7	11.6
– Employed	39.3	39.3	39.3	39.3	35.3	34.0	33.5
– Laborer	8.2	8.2	8.2	8.2	7.4	7.8	7.3
– Housewife	10.8	10.8	10.8	10.8	9.7	14.0	14.8
– Pensioner	25.2	24.4	25.2	25.2	22.7	26.5	26.6
– Job seekers	8.1	8.9	8.1	8.1	7.3	5.3	5.1
– Other	3.2	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	100.0
A.V.	2000	2000	2000	2000	2000	2000	2000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 17 – Education of the caregivers (%)

Qualification	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– No qualifications/ Primary school	7.3	7.3	7.3	7.3	7.3	5.0	5.6
– Lower secondary school certificate	18.0	18.0	18.0	18.0	18.0	27.6	26.9
– Higher secondary school certificate	49.4	49.4	49.4	49.4	49.4	46.8	47.3
– First cycle degree, Second cycle degree, Third cycle degree	25.3	25.3	25.3	25.3	25.3	20.6	20.2
Total	100.0	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	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

Table Appendix 18 – Self-assessment of the social-economic level of the family of the caregivers *interviewed (%)*

Declared level	*2019*	*2018*	*2017*	*2016*	*2015*	*2014*	*2013*
– High	1.2	1.0	0.6	9.7	1.9	8.2	8.8
– Middle-High	7.2	6.3	5.8	26.2	16.1	23.0	22.4
– Middle	48.5	49.9	50.0	46.1	46.1	34.5	33.7
– Low-Middle	32.3	33.1	33.0	16.1	26.2	23.9	24.7
– Low	10.8	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	100.0
A.V.	2,000	2,000	2,000	2,000	2,000	2,000	2,000

Source: *survey by Ermeneia – Studi & Strategie di Sistema, 2019*

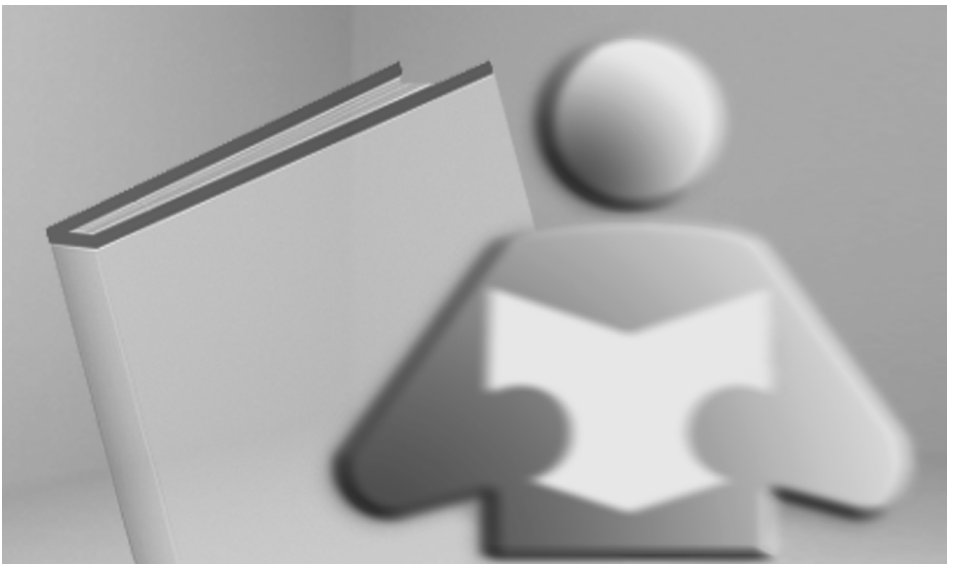
2. The complete list of contents of the 2019 Report

Part Three
***CAREGIVERS* DEALING WITH THE DE-HOSPITALIZATION PROCESS AND THE AS YET INADEQUATE CONNECTIONS BETWEEN THE DIFFERENT CARE AND REHABILITATION SYSTEMS**

APPENDICES

QUESTO LIBRO TI È PIACIUTO?

Comunicaci il tuo giudizio su:
www.francoangeli.it/latuaopinione.asp



VUOI RICEVERE GLI AGGIORNAMENTI SULLE NOSTRE NOVITÀ NELLE AREE CHE TI INTERESSANO?

Seguici in rete | Sottoscrivi i nostri feed RSS | Iscriviti alle nostre newsletter

FrancoAngeli

 ISBN 9788835112747

Copyright © 2020 by FrancoAngeli s.r.l., Milano, Italy. ISBN 9788835112747

The Health & Hospitals Report/2019, now in its 17th edition, provides an account - year by year - of the state of affairs of our mixed hospital system, which consists of a publicly-operated component (comprised of different types of institutions) and a privately-operated component (itself made up of different types of accredited facilities) .

It is an organization made up of a thousand hospitals, with 190,000 patient beds, that treats eight million acute patients annually, with inpatient admissions and day hospital admissions, as well as 500,000 people who use rehabilitation and long-term care facilities: it employs more than 600,000 workers and has a total expenditure of EUR 63.6 billion, which amounts to 55.7% of total public healthcare spending.

It should be recalled that the Report has two distinctive features.

On the one hand, it aims to understand the level of satisfaction of users and citizens with respect to their healthcare needs and, therefore, the functioning of the hospital "machine".
On the other hand, it is prepared by a "third party", who analyzes and independently evaluates the trend of the experiences and opinions of the population, as well as the performance of the hospital facilities.

The focus this year has been on the difficult pursuit of an acceptable "average level" of services to be provided in terms of time, quality, and territory (and individual hospital and post-hospital facilities).

Yet this is not the case, despite the average statistical results showing an increase in the complexity of the services offered and their effectiveness over time: indeed, the statistical average comes up against an "average level" that is not yet effective, acceptable and widespread, as confirmed by the measured phenomena.

In particular, there is the significant increase in 2019 of people on waiting lists and for longer times, compared to the already problematic situation in 2018, the progressive weariness of users following the de-hospitalization process that over the years has made patients "bounce" from hospital inpatient admissions to day hospital services, and then from the latter to outpatient day services; and there has also been the pronounced deterioration, over the last 5 years, of the "connection" systems between general medicine and hospitals and between these and post-hospitalization services (rehabilitation, long-term care, assisted living homes and home care service).

The assessment of the hospital "machine" also reported the persistence of a system defunding process, which has been underway for some time now, which places Italy at the bottom of the list of public healthcare spending out of GDP compared to the average of OECD countries. To this situation must be added the evidently problematic inefficiencies generated by the publicly-operated component, exactly as shown by the five-year monitoring of the Hospital Centers' Income Statements.

The solution to the dilemma, represented by the continuous increase in the needs and expectations of patients and citizens, on the one hand, and the parallel process of the ongoing defunding of the system, on the other, requires a realistic rewriting of the Pact between the State and Citizens, in terms of health protection (and welfare as a whole): the Cognitive Maps of the past are no longer enough to interpret the present and, even less, they are used to plan the future of a system that aims to actually preserve the universal and inclusive care objectives on which the NHS has been based since its foundation.

Ermeneia – Studi & Strategie di Sistema is a company that specializes in providing analytical and consulting activities to trade associations representing interests 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 hospital facilities of the privately-operated component of the NHS and private healthcare facilities, 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.

FrancoAngeli
La passione per le conoscenze