

Subject to the necessary premises outlined in the <u>first in-depth paper</u> on the Italian healthcare system, the following presents the findings from the analysis of available data on the average age of healthcare and administrative personnel.

1. THE AVERAGE AGE

A widely held public opinion believes that one of the root causes of the challenges affecting the Italian Public Administration is the advanced age of its workforce. But is this also the case in the healthcare sector? The answer lies in the available data on healthcare and administrative personnel employed by Local Health Authorities.

1.1 Average age of healthcare personnel

The indicator provides an overview of the average age of permanent healthcare employees¹, reflecting not only the level of personnel turnover but also the potential inclination of the Local Health Authorities toward innovation, including technological innovation, which is generally associated with a younger workforce.

On average, permanent healthcare personnel employed in Local Health Authorities are just over 49 years old².

As shown in Figure 1, the youngest personnel members are found in health authorities in Northern Italy (47 years), while the oldest are in the South, where the average age exceeds 50 years (51.2 years).

¹ This definition includes: veterinarians, dentists, pharmacists, biologists, chemists, physicists, psychologists, health professional managers, healthcare personnel-nursing roles, healthcare personnel-technical healthcare roles, healthcare personnel-inspection and surveillance roles, and healthcare personnel-rehabilitation functions; see the website of the Ministry of Health – Healthcare Professions.

 $^{^{2}}$ The data related to the indicator in question is not available for the Provincial Health Authority of Catanzaro.

47,0
49,3
51,2
49,1
Nord
Centro
Sud
Italia

Figure 1 - Average age of healthcare personnel by territory (years)

Source: Administrative Capacity Index REP - Data processing by MEF

Focus on Local Health Authorities

If the data aggregated by geographical macro-area do not highlight significant differences, the more granular, detailed data relating to individual Local Health Authorities allow for the identification of their specific characteristics (Figure 2).

The average value splits the distribution of Entities across a very wide range of values, between 30.8 and 50.7 years.

The local socio-health authority of Gallura stands out as a benchmark, employing very young healthcare personnel, on average just over thirty years old, across its three districts of Olbia, Tempio, and La Maddalena. This is nearly 20 years younger than the national average across the peninsula.

It is the only southern-based Entity among the top ten in Italy, with the remaining nine located in various northern regions: with an average healthcare personnel age around 45 years, notable examples include the Provincial Health Services Agency of the Autonomous Province of Trento; four Local Health Authorities in Emilia-Romagna, which are Romagna, Imola, Piacenza, and Reggio Emilia; the Veneto local socio-health units No. 8 Berica, No. 9 Scaligera, and No. 2 Marca Trevigiana; and the Friuli Centrale University Health Authority.

This might suggest that, since the northern health authorities are generally considered the most high performing, at least according to public opinion, a lower average age of healthcare personnel could positively impact the overall performance of the Entity.

However, it is worth noting that this hypothesis is not supported by the complete absence of central Italian health authorities among the top-ranking ones, even though they perform well overall in 50% of cases. In this specific indicator, the central authority with the lowest average

age, 47.8 years, ranking 31st, is the Local Health Authority of Rieti, which overall falls into the *Satisfactory*³ class in terms of Administrative Capacity Index.

The hypothesis, on the other hand, is confirmed when shifting attention to the opposite end of the ranking, where the last twenty-five positions are occupied exclusively by southern Entities (mainly from Sicily and Calabria) which are generally low-performing. All of them show average age values ranging from just under 55 to just over 51 years.

As shown in Figure 2, Calabria is home to the three health authorities with the oldest personnel: the Provincial Health Authorities of Reggio Calabria, Cosenza, and Vibo Valentia, where healthcare workers are on average nearly 55 years old. They are followed by five of Sicily's nine Provincial Health Authorities: those of Enna, Caltanissetta, Messina, Palermo, and Catania.

Lastly, the Local Health Authority of Avellino in Campania and the Local Socio-Health Authority No. 7 of Sulcis in Sardinia round out the list.



Figure 2 – Average age of healthcare personnel in Local Health Authorities (years)*

Source: Administrative Capacity Index REP - Data processing by MEF

*Value not available for Catanzaro

³ For the Index, see note 2. Regarding the evaluation classes of the Index, it should be noted that the classes Good, Very Good, and Excellent are considered high-performing.

Focus on Regions

Shifting the focus from individual Local Health Authorities to the regional level, the difference in average age between the top- and bottom-ranked Entities is smaller: 8 years instead of 24 (Figure 3).

Trentino-Alto Adige, home to the Health Authority of the Autonomous Province of Bolzano and the Provincial Health Services Agency of the Autonomous Province of Trento, stands out as the most virtuous region, with healthcare personnel averaging just over 45 years of age.

It is followed by Friuli-Venezia Giulia, Emilia-Romagna, and Veneto, all with nearly identical indicator values, around 46 years.

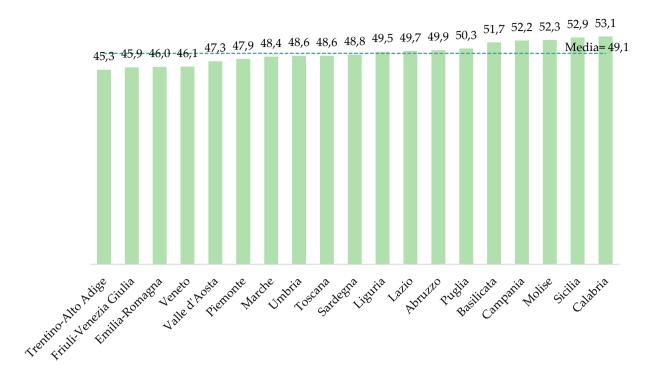
These top positions largely reflect what has already been observed in the detailed analysis of individual Entities, except for Sardinia, which, in fact, ranks in the middle of the national classification. The average age of its permanent healthcare personnel is 48.8 years. This data reflects both the positive outlier of the Local Socio-Health Authority of Gallura and the negative performance of the other seven Sardinian health authorities, where the average personnel age is at least 50 years (among them, as previously noted, is the Local Socio-Health Authority No. 7 of Sulcis, which ranks among the bottom ten nationally).

In contrast, Calabria has the highest average value for this indicator, at 53.1 years. However, it should be noted that the Region also hosts, in addition to the health authorities with an average personnel age of nearly 50 years, the Provincial Health Authority of Crotone, which is significantly younger, as reflected by the average age of its personnel, which is 48.3 years.

Just above Calabria is Sicily, with nine Entities where the average age of healthcare personnel exceeds 50 years, with values ranging from 50 years for the Ragusa Health Authority to 54.5 years for the Provincial Health Authority of Enna.

In third-to-last place is Molise, where the personnel of the Regional Health Authority, which includes the districts of Campobasso, Isernia, and Termoli, has an average age of 52.3 years. Almost identical to this is the situation in Campania, with an average indicator value of 52.2 years. However, it is more complex, as it involves six Local Health Authorities, with personnel ages ranging from the youngest, ASL 2 North of Naples (50.2 years), to the oldest, the Avellino ASL (53.5 years).

Figure 3 – Average age of healthcare personnel in the Regions (years)



Source: Administrative Capacity Index REP - Data processing by MEF

At the regional level, the South has the oldest healthcare personnel, except for Sardinia, while the Centre-North has the youngest personnel, except for Liguria and Lazio, which are positioned in the second half of the ranking.

1.2 Average age of administrative managers

Similar to healthcare personnel, administrative managers represent a significant component of the human resources employed in the country's Local Health Authorities. The age of individuals in these roles not only helps define the age structure of the Entity in question but also provides insight into its potential openness to change, both in terms of turnover and, more broadly, innovation.

In Italy, the average age of administrative managers working in the Local Health Authorities⁴ is higher, standing at 55.9 years⁵.

The youngest personnel are found in central Italy, while the oldest are in the South, with differences between Regions being relatively modest. Specifically, as shown in Figure 4, the healthcare administrations in Central Italy, with an average age of 54.7 years, are below the national average; those in Northern Italy report a value almost identical to the national average;

⁴ The data related to the indicator under examination is not available for the Provincial Health Authority of Catanzaro and for the Provincial Health Services Authority of the Autonomous Province of Trento.

⁵ The results are not comparable with those of the same indicator referring to healthcare personnel, as the focus here is on managers.

the health authorities in the South and the islands have the oldest personnel, with an average age of 56.5 years.

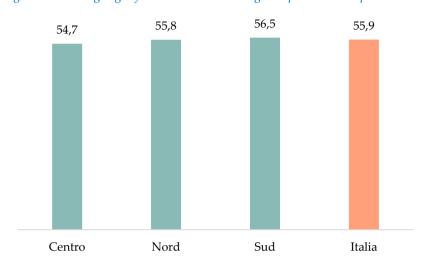


Figure 4 – Average age of administrative managerial personnel on permanent contracts in the territories (years)

Source: Administrative Capacity Index REP - Data processing by MEF

Focus on Local Health Authorities

The prevalence of older administrative managers seems to be a characteristic of the entire peninsula. In fact, with a few exceptions, for nearly all the health authorities observed, the indicator value exceeds the 50-year threshold.

However, despite this clear overall trend, some interesting specifics emerge. In this regard, a quick look at Figure 5 reveals the wide range of indicator values that characterize the Local Health Authorities across Italy: it spans from an exceptionally young Entity, with an average administrative manager age of around 35, to Entities where the average age of administrative managers exceeds 60 years.

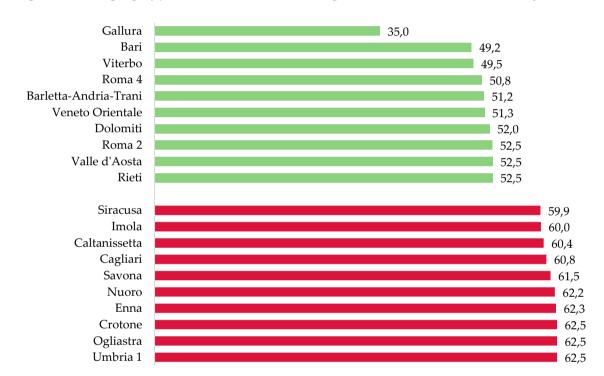
As with the average age of healthcare personnel, the benchmark for this indicator is also represented by the Local Socio-Health Authority of Gallura, which clearly focuses on younger human resources. However, in this case, it is not the only southern Entity to rank among the top ten Local Health Authorities in the final ranking: two health authorities from Puglia, Bari and Barletta-Andria-Trani, also make it into the top ten.

Among the top ten, there are also four Local Health Authorities from Central Italy: in increasing order of average age, they are Viterbo, Roma 4, Roma 2, and Rieti.

The remaining three Local Health Authorities with the youngest administrative managers are the Veneto ULSS No. 4 Eastern Veneto, No. 1 Dolomiti, and the USL of Valle d'Aosta.

Equally comprehensive in terms of geographical distribution is the breakdown of the ten Local Health Authorities in the flop ten, which, on the contrary, entrust their administrative management to managers in their sixties.

As shown in Figure 5, the average age of administrative personnel with permanent contracts working in these Entities is virtually identical and just over 62 years. This includes the Central Italy AUSL Umbria No. 1; the Sardinian health authorities of Ogliastra and Nuoro, the Sicilian authority of Enna, and the Calabrian authority of Crotone; as well as the Ligurian Socio-Health Authority of Savona (61.5) and the Emilia-Romagna USL of Imola (60 years).



Figur 35 – Average age of permanent administrative managers in the Local Health Authorities (years)*

Source: Administrative Capacity Index REP - Data processing by MEF

Focus on Regions

Looking at the regional average data, in line with the observations above, Umbria holds the negative record for the Region with the oldest administrative personnel in its health authorities (60.4 years). This is due to the presence of AUSL Umbria No. 1 and No. 2, both characterized by high values of the indicator, 62.5 and 58.3 years, respectively.

Molise and Calabria follow: both Regions employ administrative managers averaging 59 years of age. Specifically, the only health authority in Molise, the Regional Health Authority of Molise, has an average age of 59.2 years. In Calabria, four provincial health authorities contribute to the region's ranking with an average of 58.8 years: ranging from the Crotone Health Authority with an

^{*}Value not available for Catanzaro and Trento

administrative personnel average of 62.5 years to the Vibo Valentia Health Authority, which has a slightly younger average of 55.5 years.

The fifth-to-last region is in the North: Piedmont, with an average age of 57.1 years.

Sardinia, despite the peculiar case of the Local Socio-Health Authority of Gallura mentioned earlier, shows a relatively high average value of 56.3 years. This is a summary of the different management approaches adopted by its other seven health authorities, where values range from 57.5 years for the Local Health Authorities of Sassari, Oristano, Medio Campidano, and Sulcis, to 62.5 years for the health authorities of Ogliastra, Nuoro, and Cagliari, which are among the oldest health administrations in the Country.

Two Autonomous Regions with Special Statute from the North occupy the top positions in the ranking: Valle d'Aosta, with the USL of Valle d'Aosta, and Trentino-Alto Adige, with the Health Authority of the Autonomous Province of Bolzano.

Third, although essentially aligned with the previous territories, is Lazio, in Central Italy, which boasts four of its ten Entities in the top positions in Italy, followed by the Local Health Authorities of Roma 5, Roma 6, Frosinone, Roma 3, Latina, and Roma 1, all with values not far apart, ranging from 53.4 to 54.6 years.

At the top of the ranking, after Lazio, is also the South, with Puglia (54 years).

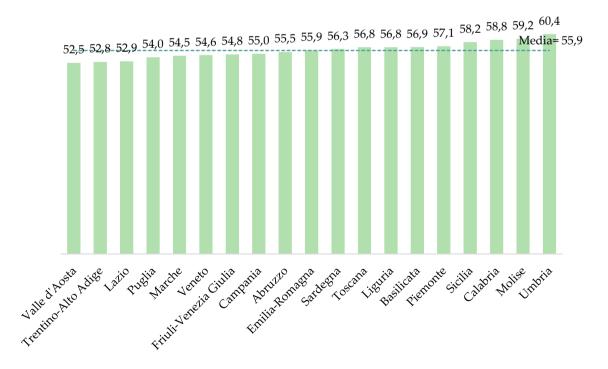


Figure 6 – Average age of permanent administrative managers in the Regions (years)

Source: Administrative Capacity Index REP – Data processing by MEF

Annex A

Below is the list of the Local Health Authorities analysed and their respective Regions:

Denominazione AST	Regione
Avellano-Sulmona-l 'Aquila	Abruzzo
Lanciano-Vasto-Chieti	Abruzzo
Pescara	Abruzzo
Teramo	Abruzzo
Matera	Basilicata
Potenza	Basilicata
Catanzaro	Calabria
Cosenza	Calabria
Crotone	Calabria
Reggio Calabria	Calabria
Vibo Valentia	Calabria
Avellino	Campania
Caserta	Campania
Napoli 1	Campania
Napoli 2	Campania
Napoli 3	Campania
Salerno	Campania
Bologna	Emilia-Romagna
Romagna	Emilia-Romagna
Ferrara	Emilia-Romagna
Imola	Emilia-Romagna
Modena	Emilia-Romagna
Parma	Emilia-Romagna
Piacenza	Emilia-Romagna
Reggio Emilia	Emilia-Romagna
Friuli Occidentale	Friuli-Venezia Giulia
Friuli Centrale	Friuli-Venezia Giulia
Giuliano Isontina	Friuli-Venezia Giulia
Frosinone	Lazio
Latina	Lazio
Rieti	Lazio
Roma 1	Lazio
Roma 2	Lazio
Roma 3	Lazio
Roma 4	Lazio
Roma 5	Lazio
Roma 6	Lazio
Viterbo	Lazio
Chiavarese	Liguria
Genova	Liguria
Imperia	Liguria
Savone	Liguria
La Spezia	Liguria

Marche	Marche
Molise	Molise
Alessandria	Piemonte
Citta' di Torino	Piemonte
Asti	Piemonte
Biella	Piemonte
Cuneo 1	Piemonte
Cuneo 2	Piemonte
Novara	Piemonte
Torino 3	Piemonte
Torino 4	Piemonte
Torino 5	Piemonte
Vercelli	Piemonte
Vco	Piemonte
Bari	Puglia
Brindisi	Puglia
Barletta-Andria-Trani	Puglia
Foggia	Puglia
Lecce	Puglia
Taranto	Puglia
Sassari	Sardegna
Gallura	Sardegna
Nuoro	Sardegna
Ogliastra	Sardegna
Oristano	Sardegna
Medio Campidano	Sardegna
Sulcis	Sardegna
Cagliari	Sardegna
Agrigento	Sicilia
Caltanissetta	Sicilia
Catania	Sicilia
Trapani	Sicilia
Enna	Sicilia
Messina	Sicilia
Palermo	Sicilia
Ragusa	Sicilia
Siracusa	Sicilia
Toscana Centro	Toscana
Toscana Nord Ovest	Toscana
Toscana Sud Est	Toscana
Bolzano	Trentino-Alto Adige
Trento	Trentino-Alto Adige
Umbria 1	Umbria
Umbria 2	Umbria
Valle d'Aosta	Valle d'Aosta
Dolomiti	Veneto
Marca Trevigiana	Veneto
Serenissima	Veneto

Veneto Orientale	Veneto
Polesana	Veneto
Euganea	Veneto
Pedemontana	Veneto
Berica	Veneto
Scaligera	Veneto

