20th Health Report

Maintenance or Transformation: Public Intervention in Healthcare at the Crossroads

English Summary

Edited by:
Federico Spandonaro, Daniela d'Angela, Barbara Polistena

Università di Roma Tor Vergata
DIPARTIMENTO DI
ECONOMIA E FINANZA

Maintenance or Transformation: the Public Intervention in Healthcare at the Crossroads

d'Angela D.[1], Polistena B.[1], Spandonaro F.[2]

For more than 20 years, the C.R.E.A. Health Report has analysed the main data describing the Italian health system, trying to extract information useful for assessing health policies and mainly providing suggestions about its evolution.

The starting point of analyses has always been the statistical analysis of available data, matched by a critical assessment of health policy interventions.

Unfortunately, the passing of time has not significantly improved the accountability of the National Health Service (NHS), nor has it clarified the true boundaries of the health sector as a whole. The concept of accountability is in fact struggling to culturally establish itself in the Public Administration. Moreover, in the health sector it is anyway proving to be completely losing with respect to the - albeit just - demands linked to privacy, which, however, we believe could be overcome if supporting health (and other) policies with quantitative analyses were really believed as a need. Indeed, year after year, access to data proves increasingly difficult and, above all, ever less timely, and this explains the increasing use of data estimates. Analyses are also made more complex by the continuous "changes of series", with data coming from different sources, or from the same organisation but referring to different surveys, showing contrasting trends despite referring to the same phenomenon.

Statistical analysis is, therefore, increasingly arduous. For 2024, however, it is also proving complex to identify regulatory instruments with sufficient depth to provide information about the course undertaken by the NHS. In fact, the health policy regulations that have had the greatest prominence - first and foremost those relating to the fight against waiting lists and the use of the so-called "medici gettonisti" (doctors on piecework working for hospitals through cooperatives and paid based on the number of days/hours worked) - regardless of the assessment that can be made of their effectiveness (which is indeed debatable) - do not seem to respond to a strategic thinking. In fact, they do not seem to clearly distinguish between causes and effects, confining themselves to trying to plug bugs (or mitigate the pressure coming from the strong demands of the masses).

In such a context, it has seemed useful to proceed by clearly separating "facts", as can be reconstructed starting from quantitative evidence, and "interpretations" and critical evaluations, and then putting forward some suggestions and proposals.

The basic question the Report poses this year is whether it is sufficient to proceed with a NHS maintenance - albeit "extraordinary" - or whether the time has come to address the need for its radical transformation. In brief, the answer that the Report gives to this question is that a transformation is necessary and not only advisable, but it is made conditional upon the need to make "uncomfortable" and difficult political choices, for which a bipartisan consensus has to be achieved. This is only possible by opening a frank and fair debate on the principles by which we wish to be inspired in rethinking the NHS and, more generally, in governing the healthcare system.

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[2] *University of Rome* "Tor Vergata", C.R.E.A. Sanità

"Facts"

The public NHS was created - first and foremost - to ensure access to care, regardless of citizens' social and economic conditions, operating in an equitable manner on both the financing and service provision sides.

With specific reference to equity, it is always worth remembering that the NHS is technically a social insurance scheme with universal coverage, by definition characterised by the pursuit of a solidarity-based redistribution. Recalling that there is an "insurance" mechanism underlying the NHS, it is a way for highlighting that it remains sustainable as long as resources and "promises" are balanced.

The impact of funding

We should note that, although the resources for healthcare technically come (mainly) from VAT and IRAP revenue, as a matter of fact the burden of funding is concentrated on less than 20% of the population: indeed, as can be seen by analysing the revenue from the personal income tax (IRPEF): indeed, as is well known (Rapporto sul Bilancio del Sistema Previdenziale italiano, Itinerari previdenziali - Report on the Budget of the Italian Social Security System) the remaining 80% pay less than the value of the health services they receive (on average) from the State.

Hence if we were to believe in the truthfulness of income tax returns, it would be legitimate to ask oneself questions both about the existence of an exaggerated income inequality at a national level, and about the consequence of this in terms of sustainability. It is, in fact, hard to imagine a public health service that economically weighs on the "shoulders" of a very small share of the population.

The NHS "promises": LEA and inappropriateness

As to "promises", the first consideration to make is that the NHS explicitly declares its own promises, at least since the moment when the concept of Essential Levels of Care (LEA) - later turned into the more general concept of Essential Level of Performance (LEP) – entered into Italian law.

Reading again the definition of LEA, we should conclude that all services are included, except for aesthetic treatments, ritual circumcision and inappropriate services. It follows that the burden relating to all "appropriate" healthcare expenses have to be borne by the NHS, with the mere exclusion of co-payments.

In practice, however, households healthcare expenses account for 24.8% of total expenditure. Even if we were to subtract the co-payments on the NHS services from this amount, the incidence would remain 24.2%, equal to € 41.4 billion. It is a very significant amount to be attributed to inappropriate services, and even underestimated in its incidence, considering that the denominator also includes the NHS expenditure for collective consumption.

In other words, the NHS indeed covers about a 75% share of healthcare expenditure, and in order to understand whether it has really fulfilled its "promises", the nature of the share of services supplied outside the NHS needs to be clarified.

If we assumes that all those non-NHS services were actually inappropriate, it could be concluded that the NHS ability to provide services would be adequate to ensure access to the LEA. It remains to be explained how such a large share of services can be considered inappropriate, since most of them are subject to medical prescription and are actually prescribed within the NHS.

Private expenditure

Contrary to the idea that the issue of "promises" can be dismissed by calling appropriateness into question, several other pieces of evidence can be recalled resulting from the analysis of households' private health expenditure.

The first consideration is that - although very significant (over € 42 billion), private expenditure underestimates the "needs" expressed by the population. In fact, giving up consumption (which now concerns 3.4 million households, of which 1.2 million are those that have completely zeroed out health consumption) implies that the expenditure survey overlooks the unexpressed needs of 4.1% of the population, i.e. 2.4 million citizens.

The second consideration is that the households' private expenditure, besides being significant in level, is also growing continuously (by a 2.4% average per year, 12.7% overall in the last 5 years), and is correlated as much with income as with situations of lower efficiency of the regional health systems (RHS). The analysis therefore suggests that there is a real need, also linked to shortcomings in the public supply.

The third consideration is that 7.7% of private health expenditure is borne by households in the first quintile of consumption, and 13.5% by those in the second quintile: since this is the least affluent portion of the population, it is at least questionable whether it can be argued that they "indulge" in consumption that is not really necessary.

Waiting lists

In view of completing the picture, it should also be remembered that, as reported in the 17th Health Report, the waiting lists for the NHS services remain the main reason for citizens' disaffection with the public service. Indeed, a large part of private expenditure - at least that of the households that can afford it - is certainly caused by the barrier to access due to waiting lists.

The disaffection of health professionals

Yet on the topic of disaffection with the NHS, mention should also be made of the disaffection of health professionals, who have recently gone on strike, but which had already been evident for some time. This can be inferred from the now ascertained scarce attractiveness of the health professions among young people, which, in the case of nurses, is now at levels that do not even allow generational turnover. It is an issue evident also among doctors for specialization that do not allow private practice, and increasingly also among general practitioners, as reported in the 19th Health Report.

Funding

With a view to completing the picture of available evidence on the state of the healthcare system in Italy, several other pieces of evidence derived from "macro-trends" seem relevant.

Firstly, international comparisons confirm that, in 2023, the share of public coverage of health expenditure in Italy stood at 74.0%, as against 78.7% in the countries that adhered to the European Union before 1995 (pre-1995 EU) and 75.2% in those that became members after 1995 (post-1995 EU). Italy now has a -4.7 percentage points (p.p.) gap (negative in equity terms) with respect to the former and -1.3 p.p. with the latter, and the gap is widening compared to 2009 by 7.0 p.p. with pre-1995 EU countries and by 10.2 with post-1995 EU countries.

Again international comparisons remind us of the fact that Italy's private out-of-pocket expenditure is 22.7% of total expenditure, as against an average of 18.8% in the other European countries. This lack of intermediation is a further element of inequity that characterises Italy and it is even more worrying, considering that it is an average between the value of the North of Italy, which reaches a share of private expenditure intermediated by health funds and insurance companies that exceeds 10%, and the South of Italy, which stands at less than 3%.

As to funding, it should also be noted that, despite the fact that over the last decade (2014-2024) the financial resources allocated to the NHS grown by € 24.1 billion (a 2% average nominal increase per year), if we divide the time horizon into three sub-periods - pre-pandemic period (2014-2019), pandemic period (2019-2021) and post-pandemic period (2021-2024) - in the first sub-period the real increase was 0.3% on average per year; during the pandemic period it reached a 3.3% average per year; in the post-pandemic period it has so far been negative (-1.5% on average per year). Therefore, despite much talk about expanding "promises" (new 'Essential Levels of Care"), a stagnating – if not regressive – funding is estimated in real terms.

Allocation

Moreover on the subject of financing, and specifically on the fair allocation of the resources, it should be noted that the regional standard assignments coming from the central government, estimated with the current allocation formula, falls within a range that

is about € 150 between the extreme values. This gap more than doubles in terms of actual (final) financing, firstly as a result of the mobility balances, and secondly, of the different incidences of the regional own revenues (basically co-payments).

At the same time, the range in which pro-capita private expenditure is positioned at regional level is € 471.8, i.e. 3 times that of the standard assignments coming from the central government and 1.4 times that of actual financing.

Expenditure

The framework of funding summarised above has repercussions on expenditure, which continues to move away from international average levels. As against a per-capita Gross Domestic Product (GDP) that is 19.7% lower than the average of the pre-1995 EU Member States (a gap down by 1.4% compared to 2022, but up by 3.2% over the last decade), public health expenditure is 44.1% below average (a gap up by 1.2% compared to 2022, and by 11.4% over the decade). The private one is 8.7% below average (a gap increasing by 2.3% compared to 2022 and decreasing by 12.0% as against 2013).

Dividing the time horizon into three two-year sub-periods - pre-pandemic period (2019-2021), pandemic period (2020-2021), and post-pandemic period (2022-2023) - a 1.6% real increase was recorded in the first sub-period, a 3.4% one in the second sub-period, and a 4.9% decrease was instead recorded in the third one.

Moving on to a statistical comparison based on a "correct" analysis of the relationship between the countries' resources (indeed GDP per-capita net of interest on public debt, as that is unavailable for financing Welfare) and health expenditure per-capita, health expenditure in Italy is currently lower than the expected level of 11.3%.

Equity

In 2022 the impoverishment caused by private out of pocket healthcare expenditures - which mainly affects elderly couples over 75, the elderly living alone and families with three or more children - involved more than 374,000 Italian households (1.4% of households and 1.9% if we consider only those incurring healthcare expenditures), with an impact that, in the South of Italy, is almost four times that recorded in the North and more than double that recorded in the Centre of Italy.

Adding to impoverishment the cases of (only) total renunciations of health care expenditure, we should observe an "economic hardship due to health expenses" that is currently affecting 1.6 million households (3.4 million citizens), with a significantly higher incidence in the South of Italy (8.7%) and among families of foreigners, couples with three or more children and single-member households where the person is under 65 years of age. Incidentally, "hardship" is closely correlated with material and social deprivation, despite the fact that - from a solidarity perspective - these individuals should be better protected, for example, through exemptions from co-payments.

A further 95,000 households are at risk of "economic hardship due to healthcare expense". These are the households at risk of giving up spending on healthcare and/or impoverishment (0.9% of those in the South of Italy spending privately on healthcare and 0.5% of those in the Centre).

Lastly, the phenomenon of "catastrophic expenditure" affects 8.6% of households (11.8% of those incurring healthcare expenditures), i.e. 2.3 million households. It affects the South and the North-East of Italy most, as well as the elderly people, living alone or in couples, and is caused primarily by dental expenses.

"Critical evaluations"

The statistical evidence summarised above prompts some considerations on the current trajectories of the NHS, and of the Italian health system in general.

Sustainability

Firstly, it should be noted that the issue of the NHS sustainability is recurrent in the debate on health policies, but it is a complex question and is often posed

in an inadequate manner: in fact, the question on sustainability - unless better expressed - has no answer other than the one that obviously "depends" on what the NHS "promises" are.

In other words, for the sake of clarity, the question must be reformulated and made explicit, asking whether the current LEA are sustainable.

Bearing this in mind, referring back to the evidence of the previous paragraph, it is reasonable to conclude that the answer is probably already negative today. Or, in any case, it risks being even more so in the future, considering the rates of introduction of new (and sometimes innovative) technologies, which push healthcare costs up (at least in the short term), as well as the evident impact of ageing and non-self-sufficiency (which remains the consequence of ageing that uses up most resources).

Two main arguments can be suggested to counter this conclusion.

The first is the excess of inappropriate services. Theoretically, as already mentioned, it is possible that the approximately € 40 billion of services currently paid directly by households are to a large extent inappropriate, and potentially so are those which more than 1 million households have given up.

This (extreme) diagnosis leaves the issue of how to tackle with the phenomenon unresolved, i.e. how to counter such widespread inappropriate prescribing. Indeed, even if it were possible to override it, the existence of a major discrepancy between "NHS promises" and "citizens' expectations" remains as an issue.

The solution should be sought in demand governance, which implies the monitoring of prescriptions. This is an issue that the NHS seems clearly ill-equipped to manage and solve, since no improvement has been recorded so far (rather, a worsening might be occurred, if we wished to attribute the increase in private expenditure to an increase in inappropriateness).

The truth could realistically lie "somewhere in the middle", and it should be recognised that there is a share of services that are unmet by the NHS, which would be part of the LEA - thus supporting the idea that the current resources are insufficient - and another share of inappropriate services, which is not governed by the NHS, both on the side of the relationship with professionals and on the side of citizens. For example, there is a lack of revision of the role played by "integrative" Health Funds, which cannot by definition be such, because to be so they should provide only (a part of) dental care and inappropriate services, although they can help to bridge the gap between LEA and "citizens' expectations".

Even in the absence of a clear public sector vision of the role to be attributed to them, this is a growing phenomenon, which - if nothing else – at least brings Italy closer to the rest of Europe in terms of intermediation of private expenditure. Various analyses show a strong liking for such coverage on the part of members (at least because it enables them to "bypass" waiting lists and, in so doing, indirectly reduce the waiting times for those who have no additional coverage). This growing phenomenon enjoys a tax advantage, from which indeed a very small group of funds - i.e. those with higher contributions - fully benefits but, to the extent that essentially contractual funds are being developed, it has the merit of providing also to employees (who are the main contributors to the NHS) an opportunity to enjoy a tax break.

The second argument is related to possible efficiency gains. For many years the C.R.E.A. Health Report has been highlighting the spending gap between the NHS and the other countries' public spending: a differential that, as explained above, is so high as to make us wonder about the NHS's ability to maintain good average levels of protection, but also to make us doubt that there are still many resources to be rationalised. The remaining possibilities for recovering efficiency are probably linked to strategies for reallocating resources: the "mantra", in this area, is certainly that of producing "value". This is a just demand, which brings us back to the issue of removing any pockets of inappropriateness, so as to free up resources for activities of greater "value", the difficulties of such a policy which we have already discussed above.

The adequacy of resources

Accepting that - with its current resources - the NHS is no longer able (or will not be able in the short term) to ensure the provision of the current LEA, we can only expect that there will be the need to either decrease (or rationalise) "promises", or increase resources.

Starting from this last point, it should be immediately reiterated that the debate on the alleged "cuts" in healthcare spending, as well as the ongoing one on the "correct" share of GDP to be allocated for the NHS needs, is fundamentally wrong. It is so because, although the Constitutional Court has recently underlined the need to give "priority" to healthcare spending, macro-economic compatibilities cannot be circumvented. It is debatable also from a statistically point of view, because the variations in spending should be evaluated in real and not in nominal terms, and the levels in the international comparison should be related to the relationship between the public resources actually allocated and the actual (total) healthcare spending. Once the analyses have been carried out correctly, as argued above, the chances of increasing the resources allocated to the Italian NHS demonstrates to be very limited.

In other words, the fact is that - in the absence of a revitalisation of the Italian economic growth which, for the time being, does not seem to materialize - additional resources are difficult to find. From this viewpoint, the financing of the post-pandemic years appears paradigmatic: the significant nominal increase of 2023 and 2024 seems to have led to a drastic slowdown for 2025, showing an evident shortcomings in planning, end apart from the promises for the following years, which will shall be measured against the future real trends of the national economy. In any case, despite a nominal increase that is decidedly higher than in previous years, the real one remains negative.

For the sake of completeness, it should be reiterated that finding additional resources appears problematic with the current levels of economic growth, and the same holds true also for a redefinition and reallocation of public priorities (which seem to be the pathway recently indicated by the Constitutional Court, which, however, does not seem to have considered the issue of competition on the resources available to other commendable spending chapters, first and foremost the one for Education). The only possible "source" (apart from further taxes, possibly even commendable as those on the consumption of harmful products - smoking, alcohol, junk food, etc. - which, in any case, do not seem decisive with respect to the compensation of the lack of growth, and therefore for catching up the growth rates of the other countries, at least the European ones) seems to be the recovery of resources currently destined for Social Protection. As already argued in previous Reports, however, this is a road that is by no means easy to follow.

The value of the public service

In short, the NHS is - first and foremost - the guarantee for Italian citizens to have universal public coverage for the risks of illness (and indeed, more generally, also the guarantee of a social commitment to the promotion of individual and collective health), and is one of the distinctive features of our way of understanding citizenship.

It is no coincidence that the concept of "financial toxicity" of care has developed in contexts that have not yet managed to define social rules so as to ensure universal protection against the risks of illness: a social achievement that is also a fundamental aspect of social cohesion.

The public nature of the NHS is, therefore, primarily to be sought in its role of ensuring the pursuit of solidarity. The latter has a content of efficiency, insofar as it removes the risks of adverse selection (in practice, the risks for which only those in worse health conditions tend to be insured), which are one of the main problematic aspects (however mitigable) of individual insurance mechanisms. The public nature, however, is not so much a prerequisite in terms of efficiency, as it is, instead, in terms of playing a role for ensuring Equity. It seems indisputable to us that the NHS was intended to be "public" so that its "rules" would be inspired by the principle of Equity: actually, perhaps not even entirely correctly, the founding Law (the well-known Law No. 833/1978)

uses the "extreme"' term of Equality in the taking care of needs.

It follows that "defending the (public) NHS" should mean '"defending the principle of Equity and Solidarity".

Equity which, however, as is widely shared in literature, has a Horizontal component (that of Equality, whereby equal treatment is expected under equal conditions) and a Vertical one (the one whereby different conditions require proportional but different treatments).

A survey involving various NHS stakeholders (representatives of Patients, Health Professionals, Healthcare Managers, Institutions and Industry), analysed in detail in the Report, however, reveals a perception of the nature of Vertical Equity that is not fully shared.

In fact, one third of respondents to the survey (33.9%) believe that the most correct definition of Equity is the one based on the idea that patients' access to (clinical/care and assistance) services should be ensured in a manner proportional to their needs, without specifying the nature of the need. A further 25.4% favour instead the idea that all citizens should have access to the same services in "exactly" the same way. 20.3% think that all patients should be able to have access to services without being conditioned by their economic resources and 10.2% recall that all citizens should share in the financing of the National Health Service in proportion to their economic resources. A residual share of respondents (3.4%) on the Equity aspect deems that access to services should not be made conditional upon patients' literacy.

Apart from their variability, the answers seem to show that there is no full convergence on the main source of barriers to access, i.e. whether (clinical) severity or something else.

Most probably, considering the need in clinical/care and assistance terms is distorting: in fact, clinical severity is already rightly recognised as a priority. At most, we could fear the existence of care and assistance barriers, considering that today the most unmet part of needs is the one related to non-self-sufficiency. It is not fully agreed, instead, that among the main barriers to access there are those deriving from patients' literacy, and those related to economic and financial means (as, instead, pointed out by Users and Health Care Professionals, who evidently stand in the "trenches" and perceive more clearly where the NHS real issues are).

Apart from semantic issues, which are also substantial, the fact remains that we must defend the NHS not because it is abstractly public, but because its nature is a prerequisite for pursuing Equity.

The "facts" set forth tell us that Equity remains wishful thinking: waiting lists are a major barrier to access, and they mostly penalise the most deprived citizens (and, therefore, also those with less literacy), as can be seen from the significant share of healthcare spending by the least affluent people. Those who give up spending on healthcare are constantly growing and almost 380,000 households become impoverished to receive care and over 1 million incurs healthcare costs that the World Health Organisation classifies as "catastrophic expenditure".

Although more than 40 years have elapsed since the establishment of the NHS, which was intended to remove territorial inequalities, the "gaps" between geographical areas of the country remain more or less unchanged.

As previously argued, however, even today – in light of their tax returns - less than 20% of the Italian population cover the average burden for healthcare (only) with the taxes paid.

In short, the risk is that of taking sides in defence of the "public NHS", not because it performs its primary public function admirably - i.e. that of ensuring the pursuit of fair and equitable conditions - but only because "public production" is seen by some as a barrier to the entry of any ("unregulated") economic interests into the healthcare arena.

"Facts" tell us, instead, that the public service must be defended, but by putting it in a position to be so: and to be so, after 40 years of failures on the equity side (starting with taxation), it will be necessary to "rethink" it with a new vision.

Policies and vision

The last two C.R.E.A. Health Reports had already emphasised the need to build a new vision on the evolution of the NHS.

However, regulatory acts, and health policies in general, do not corroborate the idea that a new vision is really being developed and strengthened.

The examples of questionable interventions and/or lack of intervention could be manifold, but - for the sake of synthesis - we will try to point out a "macro-planning" example and a "'micro-planning" one.

At the "macro" level, we should point out the stalemate (or lack of interest) in which the financing process survives, i.e. the allocation of resources to the health system and among the Regions.

Starting again from the "beginning" of the process - and therefore from the provisions of Legislative Decree No. 68/2011, where it states that "(the National Health Fund) ... is determined by agreement with the Regions, consistently with the overall macroeconomic framework, in compliance with public finance constraints and the obligations taken on by Italy at the EU level, and consistently with the needs arising from the definition of the LEA provided under conditions of efficiency and appropriateness" - it immediately appears evident that a first aspect for reflection is the manner in which the above-mentioned compensation of demands coming from the evolution of healthcare needs (requirement for LEA), with those coming from public finance constraints, has been achieved so far. In other words, the issue is to what extent we can actually ensure the "consistency" between two objectives, which – as is becoming increasingly evident - risk being in conflict with each other.

The "consistency" referred to in the regulation seems to imply that there should not be prevalence of an objective/a constraint over the other and that, therefore, the resources allocated to healthcare can be both increased to cope with an extension of the Essential Levels of Care, i.e. an increase in their costs, and decreased if the constraints referred to imply such financial straits as to require a contraction of the LEA.

Faced with stagnant if not negative in real terms growth rates in financing, due to the constraints deriving from the macro-economic framework, as argued above, the parallel desire to increase the LEA appears paradoxical, unless we assume increases in efficiency, of which, however, no trace is seen in the quantitative analyses. It rather seems more appropriate to point out that it could be support for the thesis that deems healthcare costs to be on the rise. Indeed, using the weights by age used for the allocation of funds to the Regions and applying them to the 2023 and 2019 populations, for the demographic effect alone an expected increase in healthcare costs of 0.54% for hospitalisation and 0.48% for outpatient specialist services can be inferred. In other words, even assuming constant LEA, the demographic effect alone (albeit calculated only for hospitals and specialist services) would have led to a 0.5% increase (in real terms) of the National Health Fund over four years.

The numerical considerations above make us legitimately doubt that the trade-off between public finance constraints and health needs is indeed a difficult one to "solve".

In the absence of rules that have explicitly contracted the LEA, the risk that can be feared is that "consistency" has been pursued with an "implicit" barrier in access to LEA. If this were the case, however, the risk would be an increase in inequities, as a result of a failure to govern the process by which the rights of access to services have been "redistributed". Moreover, if the resources do not follow the real increase in needs, the task of finding "coherence" between financing and the right of access to the LEA is improperly shifted onto the regional managers and the Local Health Units.

Turning to the regional allocation of resources, the critical issues are even more numerous.

Firstly, it seems to us that it is completely indefensible that the quotas of allocation for providing the LEA, and the weights for estimating the differentials in requirements (based on age) have remained constant for years, even in the presence of continuous technological and organisational innovations. Suffice it to think of the fact that over the last 10 years hospitalisations have fallen by 25.4% and days of hos-

pitalisation/access by about 2%, not to mention that the main investment in healthcare, that deriving from "Next Generation EU", intends to further shift its centre of gravity towards the "territory". In this regard, it seems paradoxical that in the allocation rules, the very item of the allocation of resources to the territory plays a residual role, moreover at the risk of being reduced because it acts as a complement to the quota for pharmaceutical care, which is continuously growing (see Chapter 10a of the Report).

As proof of the lack of credibility of these resolutions, the Regions that have developed their own explicit criteria for the internal allocation of resources derogate from the national guidelines.

In any case, the current allocation of resources generates regional assignments differentials that, as anticipated, are actually "denied" and amplified (more than doubled) by the regulation of healthcare mobility and by the different incidence of regional own revenues. This, however, is also due to the fact that the earmarked quotas, originally introduced with a reward logic, linked to the requirement for the Regions to demonstrate specific fulfilments, are now actually allocated among them on an agreement basis, with the sole purpose of managing differences in interests and to compensate for the effects of allocation that are evidently not considered justifiable even by the Regions.

It should also be pointed out that, faced with a growth in private spending, which - to a significant extent - relieves the RHS of charges for services included in the LEA (apart from co-payments, mention should be made of the € 2.0 billion spent by households on class A drugs that they would have been entitled to have free of charge), the allocation does not envisage any compensation for the Regions (typically those with lower average income levels) that enjoy this "advantage" to a lesser extent. It should be noted that this is a phenomenon that would impact the allocation much more than, for example, the introduction of the deprivation criteria in 2023. Moreover, the failure to take this into account implicitly generates an incentive for the Regions to shift burdens onto citizens (e.g. by keeping waiting lists "long"), or at least not to "counter" the phenomenon significantly. This consideration should be sufficient to make us doubt that we can reduce the issue of waiting lists to an issue of shortage of supply, as instead it seems to have been done.

Addressing a "micro" issue, although one that is equally strategic for the NHS, with a view to dealing with the shortage of staff, apart from "importing" professionals from less developed countries, action has been taken to increase/facilitate access to the training offer. We believe that this vision does not take sufficient account of various aspects, albeit abundantly documented (see Chapter 4f of the Report, but also the analyses contained in previous Reports). Firstly, the shortages do not concern doctors (except for certain specialisations); secondly, the timing of training is in fact inconsistent with the need to ensure replacements over the next few years; thirdly, the main shortage is for professionals with whom no one is really dealing, such as staff with appropriate skills for taking care of the non-self-sufficient (social and health workers, nursing assistants), currently left to the largely irregular market of "formal caregivers"; fourthly, the choices made expose the country to the risk of investing in training without having a return from that, because – if the current conditions persist - the staff, once trained, will not work in the NHS, but in the private sector or abroad.

Proper planning should start from the consideration that the underlying problem is the lack of attractiveness of these professions, which in turn is the result of insufficient social recognition (at least for some segments), but also of salaries that are deemed unpalatable with respect to the workload (and responsibilities).

Faced with a "market" situation that does not make the NHS more attractive, the attempt to counter, for example, the use of the so-called "medici gettonisti" (doctors on piecework working for hospitals through cooperatives and paid based on the number of days worked) certainly appears to be losing. It should rather be acknowledged that conditions of attractiveness for the NHS roles should be recreated. It is certainly not only an issue of remuneration, but it also involves the issue of responsibility, workloads, lack of opportunities for career progression, the

bureaucratisation of the profession, etc. The salary aspect, however, cannot be ignored: if we want or have to prioritise staff motivation, it appears necessary to become aware of the need to "sacrifice" the numerical aspect (recruitment), in order to be able to allocate any resources to increasing salaries. This option, however, requires such a radical reorganisation of work, probably based on the exploitation of the new "digital technologies", as to increase the productivity of work itself.

Proposals

Based on the considerations regarding the current trajectories of the NHS, some of which are made in the previous paragraph, it is justified that - as anticipated in the introductory notes - the Report's answer to the question of whether it is sufficient to proceed with maintenance - albeit extraordinary - of the NHS, or whether the time has come to address the need for its radical transformation, is that a transformation is necessary and no longer merely advisable.

The transformation has a major objective, which is to make the NHS capable of realigning its "promises" with the resources available, avoiding implicit rationing, which is by definition a source of injustice, insofar as it penalises the most fragile population, in terms of health but even more in terms of census and health literacy.

In view of pursuing this goal, public intervention must broaden its boundaries, relinquishing to cling to the idea of a hegemonic position of the public service, focusing on the governance of the whole health system, including the (significant) share of health services that we now classify as private health.

Faced with limited additional resources if not nil, and of possible significant but no decisive reductions of inefficiencies, we need to make "uncomfortable" political choices, which concern a rationalisation of the "promises" of public protection.

In view of rationalizing, however, we first need to start a debate on the principles to be followed: without claiming to be exhaustive, we would mention as options that of taking action according to the clinical/care severity of needs (prioritising the most severe pathologies?) Or the option of taking action based on the merit of answers (prioritising interventions with greater therapeutic or social value)? Or that of taking action on the basis of barriers to access (i.e. prioritising the needs of the less affluent and/or the less "health literate")?

An "informed" choice preliminary requires a democratic sharing of the principles by which we wish to be inspired.

A need that also derives from the fact that having a vision implies setting priorities, and setting priorities implies, by definition, making politically "uncomfortable" choices. This consideration leads us to state that a bipartisan sharing of the principles of public intervention (governance) in the health sector is necessary to avoid the risk of the health sector becoming the subject of mere party clashes.

In other words, if we abandon the idea that maintenance of the NHS – albeit extraordinary - is sufficient, we can no longer pursue the desire to confine ourselves to correcting one aspect or another of the system (despite the fact that there are many possible improvements). We cannot do so, if nothing else because decades of superfetation of rules and regulations issued for short-term purposes have created a problematic "ecosystem": rules introduced to make a quick fix for a problem, have then ended up contradicting other objectives, thus creating new problems.

What is therefore needed is a phase of "high" reflection - as the one of 1978 certainly was - aimed at assessing how the model of public intervention in the health sector can/should be redefined, adapting it to the characteristics of today's Italian society and economy, which are no longer the same as 1978.

"High" reflections must start from principles: for this reason C.R.E.A. Sanità has deemed it appropriate to provide a starting point for a political exchange of views on the subject, investigating among NHS stakeholders the "value", but also the actual "meaning" attributed to certain principles.

To this end, a survey has been promoted and administered among the members of the Expert Panel of the study "La misura della Performance socio-san-

itaria regionale" (Measuring regional social and health Performance) (2024), representing the main categories of NHS stakeholders: Patients, Health Professionals, Health Managers, Institutions and Industry.

As it is widely shared that a large part of the principles which inspired the creation of the NHS are still valid (e.g. Universalism), or at most require some "modernisation" (e.g. expanding the boundaries of the Global Response in a "One Health" logic), the survey has focused on issues that may be "divisive", by particularly asking the Expert Panel members' opinion on the meaning to be attributed to the following principles:

- *Equity*
- *Subsidiarity*
- *Appropriateness*
- *Public Service*
- *Integrative services.*

Referring to Chapter 4b of the Report for a complete analysis of the answers, we would like to point out that the survey results confirm that different views on the founding principles of the NHS coexist among the NHS stakeholders, also depending on their different nature.

It has already been argued that views on the content of the Equity principle do not fully overlap. We will here confine ourselves to adding that - as highlighted by the answers that emphasised the economic aspects of access, as well as equity on the financing side - in a perspective of rationalisation/prioritisation of interventions, the issue of the credibility of Italy's tax system emerges with all its tragic nature. A universalistic Welfare that cannot rest on a credible "means testing" is at risk of being completely unfair and, therefore, socially unjust.

Incidentally, the inability to make Italy's tax system credible "justifies" the logic of "everything to everybody", which in fact has characterised the NHS for many decades, and which has never actually been completely abandoned. In other terms, it ultimately appears to be a paradoxically functional choice, specifically to bypass the problem of the lack of a credible means test to allocate and ration fairly and in an equitable manner.

As to the Subsidiarity principle, which is central in a context aimed at revising the "hegemonic" positioning of the NHS, the answers provided quite clearly shows that, even in this case, there is no consensus on how to adapt it to the specificities of the health system. In general terms, an interpretation prevails that almost goes as far as denying the principle, recognising the right of the higher-ranking body (the NHS) to replace the lower-ranking bodies, regardless of their ability to meet the population needs.

As to the appropriateness principle, there is convergence on the most frequent definition in the Italian healthcare legislation, which sees it as adherence to Clinical Guidelines, integrated with the principle of economic efficiency in the provision of services. The aspect of the patients' different eligibility to services based on their socio-economic characteristics, for example, is scarcely perceived as a discriminating factor of appropriateness.

With regard to the concept of Public Service, there is a strong fragmentation of opinions. In general terms, the public nature of the service is still linked to the concept of "public production", with a minority of respondents believing that the regulatory power is the aspect that makes the service actually "public". As to the aspect of production, the sample is divided between the "supporters" of a supply reserved to public facilities, and those who believe it can be extended to private facilities, provided that they meet specific requirements and are contractualized under the NHS regime. The issue of the public nature of the Service also deserves to be discussed, since it is at least debatable whether the production aspect is the discriminating factor in defining the Service as such.

Lastly, with regard to the concept of "integration services", despite the "resistance" and reluctance of the part of healthcare Professionals and Managers, who restrict their nature to the services non falling within the LEA, there appears to be a growing belief (even among the representatives of the Institutions) that the concept can/should be extended to include the services falling within the LEA but provided in a different manner from those that the public sector can ensure. For Users, the concept should be further broadened to include all services that imply citizens'

cost sharing.

Even with the limits of the survey described, it clearly emerges that there is no true consensus on the principles that should inspire public intervention in healthcare. It should be emphasised that the lack of sharing probably makes it currently impossible to take action for a transformation of the system, insofar as the latter requires choices that we have defined as "uncomfortable" and, therefore, such as to require a broad convergence of opinions in order to be adopted and, above all, accepted by citizens.

Based on the analyses proposed, it seems that the need for a new vision regarding the role of public intervention in healthcare cannot be postponed any longer. While a maintenance of the system could take place with agreements on individual aspects, the creation of a new vision - heralding a real transformation of the system, in such a sensitive and central area for our way of understanding citizenship - requires a bipartisan agreement, which must be based on a transparent exchange of views about the principles by which we should want to be inspired.

CHAPTER 1
The socio-demographic context

Carrieri C.[1]

Chapter 1 focuses on the context factors (demography and family structures, education, production, income and the labour market) that have an impact on the social and health sector.

It describes the development of a number of indicators that are deemed relevant for understanding the evolution of the social and health system, generally following their development over the last ten years.

The most important factors for the socio-health system analysed in this chapter include the demographic evolution in Italy, characterised by a fast ageing of population, due to both the decreased birth rate and the lengthening of life expectancy.

More specifically, Italy's birth rate (6.4 per 1,000 inhabitants) is the lowest in Europe, while there has been a reduction in the mortality rate over the decade in all age brackets, and particularly in the oldest ones. In the 80-84 age bracket, there has been a reduction over the decade of 4.1 percentage points (p.p.), while in the 85-89 age bracket the decrease has been equal to 2.8 p.p..

Italy already records the highest share of population over 75 years of age in Europe (12.3%), a value that differs by +4.3 p.p. from the post-1995 European countries and by +1.7 p.p. from the pre-1995 European countries.

In this chapter it is also noted that, in the period under consideration, Italy recorded the highest growth in the share of population over 75 of age among the European Member States.

Despite the fact that the population continues to age, the prevalence of disability is decreasing: in this regard, Italy records one of the lowest rates in Europe, at 5.1%, compared to a 7.4% average rate in the pre-1995 European countries and a 7.2% average rate in the post 1995 European countries.

The disability rate has also decreased over the decade among the over-65s, except in the South of Italy, where it has increased by a 0.2% average per year.

In any case, Eurostat estimates that, in Italy, in 2022 (the last year for which data is available), people had a healthy life expectancy of 67.4 years (the highest rate in Europe): a value that is increasing over the decade by 5.8 years and is higher than the European average by 4.8 years.

It should be noted that, compared to other countries, Italy has experienced one of the highest increases in life expectancy at birth (+0.9% on average per year), as against Germany (+0.6% on average per year), France (+0.1% on average per year), and Spain (-0.5% on average per year), despite a very limited growth in total health expenditure (+2.6% on average per year, as against Germany (+4.1%), Spain (+3.30%) and France (+3%).

On the socio-economic front, although Italian indicators show improvements, the population's average education level remains below the European average, ranking – inter alia – in last place in terms of the share of people with a university degree.

Moreover, Italy's GDP per-capita is also lower than the European average by 6.4%, without considering the higher incidence of public debt.

In the last decade, the increase in Italy's GDP per-capita was 2.8% on average per year; growth in the European is higher only than the growth recorded in France (+2.5% on average per year).

[1] C.R.E.A. Sanità

At the regional level, there are still clear differences in the level of GDP per-capita, which correlates positively with healthy life expectancy; on the other hand, the levels of income inequality within Regions are not really relevant.

Italy is also the country in Europe with the lowest employment rate (66.3%) and, at the regional level, a clear North-South gradient, with a difference in employment of +22.4 p.p. in favour of the North.

In short, the country has - on average - good health levels compared to Europe, albeit with strong regional variability and a clear gradient in favour of the North. Nevertheless, changes in the family structure and fast ageing risk significantly increasing the population's needs, as against a socio-economic context that, on the other hand, shows many shadows both for the progressive 'impoverishment' compared to other European countries, and for the persistent gaps in terms of lower average levels of population's education and employment, as well as greater inequalities in income distribution.

CHAPTER 2
Funding

Lo Giudice C.[1]

Chapter 2 analyses the funding process of the National Health System (NHS), by also making a comparison with the public coverage of the other European (EU) countries.

In this regard, we can note that, in 2023, the share of public coverage of health expenditure stood at 78.7% on average in the pre-1995 EU countries and at 75.2% in the post-1995 EU countries. Italy stood at 74.0%, with a gap of -4.7 percentage points (p.p.) compared to the former ones and of - 1.3 p.p. compared to the latter ones. The gap increased as against 2009 by 7.0 p.p. compared to the pre-1995 EU countries and by 10.2 p.p. compared to the post 1995 EU countries (it was positive by 4.5 p.p.).

The analysis of the national financing process highlights that, in terms of composition, over the last five years (2019-2024) the share of financing for general purposes and based on general criteria (the so called finanziamento indistinto) has decreased by 0.9 p.p., within which the share for specific purposes (the so-called quota finalizzata) has instead increased by 3.9 p.p.. The restricted share for Regions (the so-called quota vincolata per le Regioni) has increased by 0.4 p.p., while the other items have increased by 0.3 p.p..

With regard to the level of financing, in the last decade (2014-2024), there has been an increase in the standard national requirement of € 24.1 billion (+2.0% annual average), while the "Central Financing" has grown by € 22.6 billion (+1.9% annual average), and the "Actual Financing" by € 25.0 (+2.0% annual average). In real terms, the growth of the standard national requirement has been 0.2% on average per year, while that of the "Central Financing" 0.1% on average per year, and that of the "Actual Financing" 0.2% on average per year.

Dividing the time horizon into three sub-periods, the pre-pandemic (2014-2019), the pandemic (2019-2021) and the post-pandemic one (2021-2024), it emerges that, with specific reference to the standard Health Requirement, in the pre-pandemic period the nominal increase was 4.1% (0.8% on average per year), and the real increase was 0.3% on average per year. In the pandemic period, the nominal increase reached 6.6% (a 3.3% average annual increase), equal to a 2.4% real average annual increase. In the post-pandemic period, growth amounted to 9.8% (a 3.2% average annual increase), with a 1.5% real increase on average per year.

In the pre-pandemic period, "Central Financing" recorded a 4.8% nominal increase (a 0.9% average annual increase), and a 0.5% real increase. In the pandemic period, the nominal increase reached 6.4% (a 3.1% average annual increase), equal to a 2.3% real average annual increase. In the post-pandemic period growth was 8.7% (a 2.8% average annual increase), with a 1.8% real increase.

Finally, "Actual Financing" in the pre-pandemic period recorded a 4.5% nominal increase (a 0.9% average annual increase), and a 0.4% real increase. In the pandemic period, it reached 7.7% (a 3.8% average annual increase), equal to a 2.9% real average annual increase. In the post-pandemic period, growth was 8.8% (a 2.9% annual average increase), with a 1.8% real increase.

In per-capita terms, we can note that - compared to an average value of € 2,098.6 - the regional distribution of the pre-mobility financing for general pur-

[1] C.R.E.A. Sanità

poses in the Regions (2023) envisages an allocation of € 2,185.1 for the Region with the highest amount (Liguria), and an allocation of € 2,030.2 for the Region with the lowest amount (Autonomous Province of Bolzano), with a difference of € 154.9.

The "Central Financing" is equal to an average of € 2,107.5 per-capita, with the highest value in Molise (€ 2,309.5) and the lowest one in Basilicata (€ 1,988.8): the difference between the two is equal to € 320.7.

Similarly, the "Actual Financing" per-capita is equal to an average of € 2,236.8, with the highest amount in Emilia-Romagna (€ 2,432.2) and the lowest one in Calabria (€ 2,092.3): the difference rises to € 339.9.

In summary, Italy's public coverage is lower than the European average and the gap tends to widen further, due to low growth: despite significant nominal increases, over the last five years the financing of the NHS has not even managed to cover the costs due to higher inflation.

Lastly, it can be noted that the regional distribution sees a differential in per-capita requirement of about € 150: due to mobility and partly to own revenues, the actual financing differential doubles, thus also raising questions about the fairness of the distribution of resources.

CHAPTER 3
The evolution of health expenditure: international comparisons and national trends

Ploner E.[1], Polistena B. [2]

The Chapter 3 focuses on the analysis of health expenditure trends (in its public and private components), making comparisons both at regional level and with respect to European countries.

The analysis showed that the total national health expenditure per-capita in 2023 (-37.8%) was significantly lower than that of the remaining countries that joined the European countries (EU) before 1995 (pre-1995 EU).

The Italian average growth rates remain lower than the EU average ones, thus leading to Italy's progressive detachment from the spending levels of the pre-1995 EU countries. Over the last year, Italy has recorded a 0.3% growth of the total health expenditure per-capita as against a 2.3% growth in the pre-1995 EU countries, although the GDP per-capita has grown in a much more consistent way, and at a higher rate than in the European reference countries (+6.6 in Italy vs +4.8% in the pre-1995 EU countries).

At the same time, Italy's health expenditure per-capita is coming close to that of the post-1995 EU countries: although still 80.3% higher, the gap has narrowed by 114.5 percentage points (p.p.) compared to 2013, of which 30.0 p.p. over the last year alone.

To a large extent, the highlighted expenditure gaps are influenced by the trends of the public component.

For this item, the gap is -44.0% (up by 1.2 p.p. on the previous year); the growth of the gap between 2013 and 2023 was 11.4 p.p..

Compared to the post-1995 EU countries, Italy's public expenditure gap has narrowed by 138.1 p.p. over the last decade.

As far as the private component of health expenditure is concerned, the gap between Italy and the post-1995 EU countries is considerably smaller, being equal to -8.7%, but increasing by 2.3 p.p. over the last year.

Compared to the post-1995 EU countries, the gap has increased by 5.2 p.p., although decreasing by 34.7 p.p. compared to 2013.

The incidence of private expenditure on Italy's GDP in 2023 amounted to 2.2%: a value that was 0.3 p.p. higher than that of the post-1995 EU countries (- 0.1 p.p. in 2013 and - 0.3 p.p. in 2003) and 0.6 p.p. higher than that of the post-1995 EU countries (+ 0.3 p.p. in 2013 and + 0.4 p.p. in 2003).

In other words, since 2015 Italian households have shown a greater propensity - or perhaps we should say a greater need - to spend privately on healthcare, both compared to the other pre-1995 EU countries and to post-1995 EU countries.

In terms of macro-economic compatibility, Italian expenditure can be considered "undersized" with respect to expectations (based on available resources): considering the level of Italian GDP net of interest payable on public debt, we would expect - in fact - health expenditure to be 11.3% higher than the current one.

Looking at the national expenditure trends, according to the findings of the System of Health Accounts (SHA), Italy's health expenditure per-capita, equal to € 2,906.6 in 2023, is 0.2% higher than over the previous year, but the analysis of the real values highlights a 4.9% negative variation. Public

[1] C.R.E.A. Sanità
[2] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"

health expenditure (€ 2,184.1 per-capita) and private health expenditure (€ 722.4 per-capita) have also recorded a real decrease compared to the previous year: -5.4% for the public component and -3.2% for the private component. It should be noted that in the two previous two-year periods (2018-2019 and 2020-2021) they had shown real positive changes.

At regional level, there is still a significant difference in health expenditure per-capita: the difference between the Region with the highest expenditure and the Region with the lowest one is 1.4 times, (€ 995.7); even excluding the Special Administrative Regions, the difference remains considerable and amounts to € 662.1 (1.3 times).

The difference is largely attributable to the private component: for this item, the difference between the Region with the highest expenditure and the Region with the lowest one is more than 2 times (€ 471.8), a value that is on the increase with respect to the previous year when the difference was € 464.7.

Furthermore, it should be noted that, if we also consider the (public and private) social-health expenditure on Long Term Care (LTC), in 2023 the social-health expenditure amounted to a total of € 200.3 billion (€ 3,395.1 per-capita), equal to 9.4% of GDP (-1.0 p.p. compared to 2022). 64.3% of the expenditure is public and 21.3% is private and borne by households; 85.6% is healthcare expenditure and the remaining 14.4% pertains to social benefits linked to LTC.

CHAPTER 4a
The international commitment to achieving universal health coverage

Carbonaro I.[1]

In 2015 the United Nations adopted the 2030 Agenda for Sustainable Development with 17 Sustainable Development Goals (SDGs) divided into 169 Targets.

Three fundamental principles were used to shape the SDGs:

1. *to leave no one behind*
2. *to ensure fairness and dignity for all*
3. *to achieve prosperity within the Earth's restored and safe operating space.*

SDG 3 aims to ensure healthy lives and promote well-being for all and at all ages and it is the central goal referred to within all 17 SDGs.

In general terms, "health is an issue that affects all people, and is influenced by (and contributes to) policies across a wide range of sectors". Achieving SDG 3 will depend on (and contribute to) progress on other SDGs: poverty reduction is a case in point.

SDG 3 is broken down into 13 Targets, among which Target 3.8 – "Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all" - is particularly relevant.

The topic of Universal Health Coverage (UHC) is on the agendas of major international organisations such as the World Health Organisation (WHO) and the United Nations Organization (ONU).

Many challenges need to be addressed in order to achieve UHC.

In September 2019, at the United Nations High Level Meeting (UN HLM) "Universal Health Coverage: Moving Together to Build a Healthier World", world leaders endorsed a Political Declaration on health that is the most ambitious and comprehensive in history. In adopting it, they committed themselves to ensuring that, by 2030, every person, in every country, can receive all the quality health services they need without suffering economic hardship.

This result was prepared by UHC2030, a multi-stakeholder partnership dedicated to coordinating and expanding the efforts of WHO, the World Bank, national governments, civil society and the private sector on strengthening health systems and achieving UHC. The different actors in the UHC movement developed a set of fundamental requests or demands ("Key Asks") to national political leaders to step up the achievement of UHC. These demands were also recalled in the last HLM of 2023, with an even stronger reference to actions to be taken for pursuing UHC.

The 8 "Key Asks" of the UHC2030 are the following:

1) *to ensure political leadership beyond health*
2) *to leave no one behind*
3) *to regulate and legislate*
4) *to uphold quality of care*
5) *to invest more, to invest better*
6) *to move together*
7) *gender equality*
8) *emergency preparedness.*

In addition to these demands, there are more recent challenges at the international level, some of which have been debated for some time, but have aroused renewed interest in national and international fora for achieving universal health coverage. They concern: a) strengthening primary care; b) reducing inequalities; c) climate, demographic and risk factor

[1] C.R.E.A. Sanità

changes; d) health problems in high-risk settings; e) antimicrobial resistance; f) multi-sectoral approaches; g) the information system.

Global monitoring reports on the progress of universal health coverage are drafted by WHO and the World Bank Group every two years (the latest one is the Tracking Universal Health Coverage: 2023 Global monitoring report).

Progress is monitored using two indicators: indicator 3.8.1, which measures the coverage of essential health services, and indicator 3.8.2, which measures the incidence of catastrophic health expenditure.

We are not yet on track to achieve UHC. The Political Declaration of the last HLM of 2023 provides a useful roadmap for stepping up the implementation of actions to achieve UHC.

Globally, more than half of the world's population is not covered by essential health services (around 4.5 billion people in 2021, mainly among rural and poorer populations), while financial difficulties due to out-of-pocket healthcare costs have worsened since 2015, affecting 2 billion people in 2019.

2.2% of the European (EU) population reported unmet medical needs in 2022, due to financial reasons, long waiting lists or travel distances.

The three fundamental principles on which Italy's National Health Service (NHS) has been based since its inception - universality, equality and equity - are looked upon with attention at the international level. But they are still far from being fully achieved, as can be noted by seeing the almost 4.5 million people who gave up treatment in 2023, 2.5 million of which for economic and financial reasons.

Ultimately, in order to ensure that every person can benefit from the human right to health, political leaders should make fair and reasonable choices in the economic, financial and social spheres: UHC is, after all, a political choice.

CHAPTER 4b
The founding principles of the National Health Service

d'Angela D.[1], Polistena B.[1], Spandonaro F.[2], Expert Panel[3]

Faced with the Research Centres' many appeals for a new reform of the National Health Service (NHS) - deemed necessary to make the NHS capable of rising up to the future challenges brought about by the evolution of demographic, economic and technological factors - in a context of persistently weak economic growth, some people think that the need for such a reform can be chalked up to a sort of "special maintenance", while for others it should be the harbinger of a radical transformation of the Service.

Adopting this latter perspective, we note that there is a lack of debate on the principles that should inspire a change in public intervention in the health sector. Moreover, the lack of convergence on the basic principles seems to be one of the main reasons preventing agreement on the possible lines of reform.

Nevertheless, it is widely agreed that a large part of the principles that inspired the creation of the NHS remain valid or at most require some "modernisation".

Hence, in order to provide a starting point for the aforementioned exchange of views, it has been deemed appropriate to investigate the "value", but also the actual "meaning" attributed by the NHS stakeholders to the principles that may be the most "divisive". In particular, a survey has been devised and distributed among the members of the Expert Panel of the italian C.R.E.A. Sanità study "Opportunità di tutela della salute: Le Performance regionali" (Measuring the Regional Health and Social Performance) (2024), who represent the main categories of NHS stakeholders: Patients, Health Professionals, Health Management, Institutions and Medical Industry.

Specifically, the survey has sought the opinion of the Expert Panel members on the meaning to be attributed to the following principles:.

- *equity*
- *subsidiarity*
- *appropriateness*
- *Public Service*
- *supplementary services.*

59 members, representing all italian Regions, replied to the survey: 9 from the Medical Industry; 9 from (national, regional and local) Institutions; 15 from Corporate Management (General Managers, Health and Administrative Directors of Local Health Units); 14 from the Health Professions (scientific societies/associations) and 12 from Users.

The results of the survey have been analysed by individual stakeholder category for each "principle".

As to the equity principle, the replies show a lack of agreement on the nature of equity. The majority expresses it in terms of access regardless of "need", but the nature of this "need" remains unclear: Institutions and Health Management refer to the "official definitions" (which do not fully clarify its nature). On the other hand, Users and (partly) representatives of the Health Professions recall that the "need" should be expressed in terms of possibility of access to services, highlighting that the real barrier to access is the economic and financial one.

Particularly interesting is the fact that only the

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[2] *University of Rome* "Tor Vergata", C.R.E.A. Sanità
[3] *Expert Panel of the study "La misura di Performance socio-sanitaria regionale" (Measuring the Regional Social and Health Performance), 2024*

Health Professionals highlight the issue of equity "upstream" as a priority, i.e. equity in terms of funding of the system, which Italy's tax system is in no way able to guarantee.

On the other hand, there is not yet particular awareness among stakeholders of the barriers to access due to the different levels of patient literacy.

As to the principle of subsidiarity, the replies obtained almost go as far as denying the principle. Institutions, Management and Healthcare Professionals refer to the "official definitions", i.e. the provision of Essential Levels of Care (LEA) is the responsibility of the public sector - at the most supported by the private sector in the event of insufficient supply (a concept that had somehow been overcome, although later "mitigated" with the shift from Contracting under the NHS regime to Accreditation). Based on this view, the Intermediate Funds are entrusted with the provision of the services not falling within the LEA, which - under the current legislation – clearly are a set of services that, except for dentistry, is largely suspected of inappropriateness. The greatest share of replies in keeping with the principle of subsidiarity (which entrusts Institutions with the task of regulating the system) has been provided by Users.

In short, there is no shared interpretation of the subsidiarity principle, adapted to the specificities of the health system, thus leading to the need for a transparent political debate on the subject.

As to the principle of appropriateness, there is convergence on the most frequent definition in healthcare legislation, which sees it as adherence to clinical Guidelines, also including the aspect of economic efficiency in the provision of services.

It emerges that there is a consensus on the fact that the principle is to be seen in a "centralized" perspective: only a minority of respondents has recalled the need to relate appropriateness to the regional Diagnostic and Therapeutic Care Pathways (PDTA).

It also emerges that the aspect of the eligibility of patients based on their socio-economic characteristics is not perceived as a relevant factor in the implementation of the principle.

With regard to the concept of Public Service, there is a strong fragmentation of opinions. In general terms, the public nature of the service is still linked to the concept of "public production", with a minority of respondents believing that the regulatory power is the aspect that makes the service "public". As to the aspect of production, the sample is divided between the "supporters" of a supply reserved to public facilities, and those who believe it can be shared with private facilities, provided that they have specific requirements and are contractualized by public facilities under the NHS regime.

Therefore, even the issue of the public nature of the service deserves more in-depth study and comparisons, since it is at least debatable whether the production aspect is the truly discriminating factor in defining the service as "public".

Lastly, with regard to the concept of "supplementary services", despite a certain "resistance" and reluctance on the part of Healthcare Professionals and Management, who restrict the supplementary nature to the services not falling within the Essential Levels of Care (LEA), in keeping with the regulations, there appears to be a growing belief (even among the representatives of the institutions) that the concept can/should be extended to include the services falling within the Essential Levels of Care, but provided in a different manner from those that the public sector can ensure. For users, the concept is further broadened to include all services that imply cost-sharing.

The replies obtained ultimately urge a revision of the current definition of supplementary services, moving towards an extension involving the ways to supply them.

In short, the results of the survey confirm that different visions coexist among italian NHS stakeholders on the founding principles of the Service and on the role of public intervention in healthcare, also considering the different nature of stakeholders.

This reaffirms the need to promote a broader debate on the content and value of the principles by which a possible reform of the NHS should be inspired, since this is a prerequisite for the possibility of reaching a consensus on which to build a pathway for the transformation of the NHS.

CHAPTER 4c
Regional Cancer Networks: Governance, Management and Leadership

Cepiku D.[1], Mastrodascio M.[1], Zazzera A.[1]

Research Aims:

This research aims to develop a model to identify, within specific contextual conditions, the Performance and outcome determinants of a Network. To achieve this objective, the Dynamic Multidimensional Model of Network Performance (Cepiku, 2014) is applied to three case studies involving Regional Cancer Networks in Piemonte and Valle d'Aosta, Toscana and Campania, utilizing the comparative case study methodology (Yin, 2013).

The study concludes by presenting an analytical model structured around five macro-categories of variables: exogenous factors, internal resources, external resources, Network management characteristics, and Network outcomes. This model provides a framework for future research, enabling quantitative comparisons across all Regional Cancer Networks to identify the Network features associated with superior outcomes.

The Network Tool in Oncology

The literature extensively highlights the effectiveness of collaborative governance approaches, particularly Networks, in addressing complex issues ("wicked problems") compared to traditional models where organizations operate independently (Keast et al., 2009; Meneguzzo and Cepiku, 2008). Networks are characterized by the presence of autonomous and interdependent actors who, through the organization of their interactions, create system-wide value. which must be equitably distributed to ensure the Network's long-term stability. The interdependence arises from the insufficient resources and/or knowledge at the disposal of individual actors to address complex challenges. This requires the necessity of sharing resources to promote interaction among Network members, which must be based on mutual trust as well as shared rules and objectives. However, Networks face several challenges, including divergent motivations and goals among partners, coordination difficulties, a potential loss of autonomy, insufficient incentives for collaboration, and lack of accountability mechanisms. These issues can significantly hinder the effectiveness of the Network's operations. The Network model represents a fundamental tool to address the inherent complexity and uncertainties of public health (Ferlie et al., 2012; Cepiku and Mastrodascio, 2024). More specifically, it exemplifies how public health services and policies can be made more efficient and effective. Among medical specialties, oncology represents a particularly suited field to apply Network organizational model, due to the high incidence of cancer-related diseases and the need to define personalized care pathways that are shared across different care settings. Consequently, cancer Networks have emerged as an essential instrument at both national and international levels as they facilitate more equitable access to specialized care and help overcome logistical and resource barriers (Calman and Hine, 1995). From the users' perspective, the delivery of oncological services represents an excellent example of the application of the Network model, through which patients receive specialized care from multiple healthcare teams located in different facilities, characterized by limited human resources and small budgets. In academic literature, a universally accepted definition of an oncology Network is still lacking, particularly

[1] *University of Rome* "Tor Vergata"

regarding the key factors that drive success or help overcome obstacles. Some studies focus on the administrative and managerial dimensions of these Networks, while others prioritize the enhancement of clinical pathways and the dynamics of collaboration among the various actors involved in oncology care.

Case Studies

The analysis of Regional Cancer Networks in Piemonte–Valle d'Aosta, Campania, and Toscana highlights their shared commitment to enhancing access to and the quality of oncology care on a regional scale, despite encountering significant challenges. The cancer Network established in Piemonte and active since 2010, benefits from a long-standing tradition and a well-structured governance model, however, it is hindered by the absence of an integrated digital platform that could streamline coordination among stakeholders. In Campania, the Network was established in part to address the issue of healthcare migration, achieving noteworthy success through the integration of digital tools and professional collaboration. Nevertheless, it operates without dedicated funding, which presents a significant limitation.

Characteristics of the Regional Cancer Networks of Toscana, Piemonte-Valle d'Aosta, and Campania

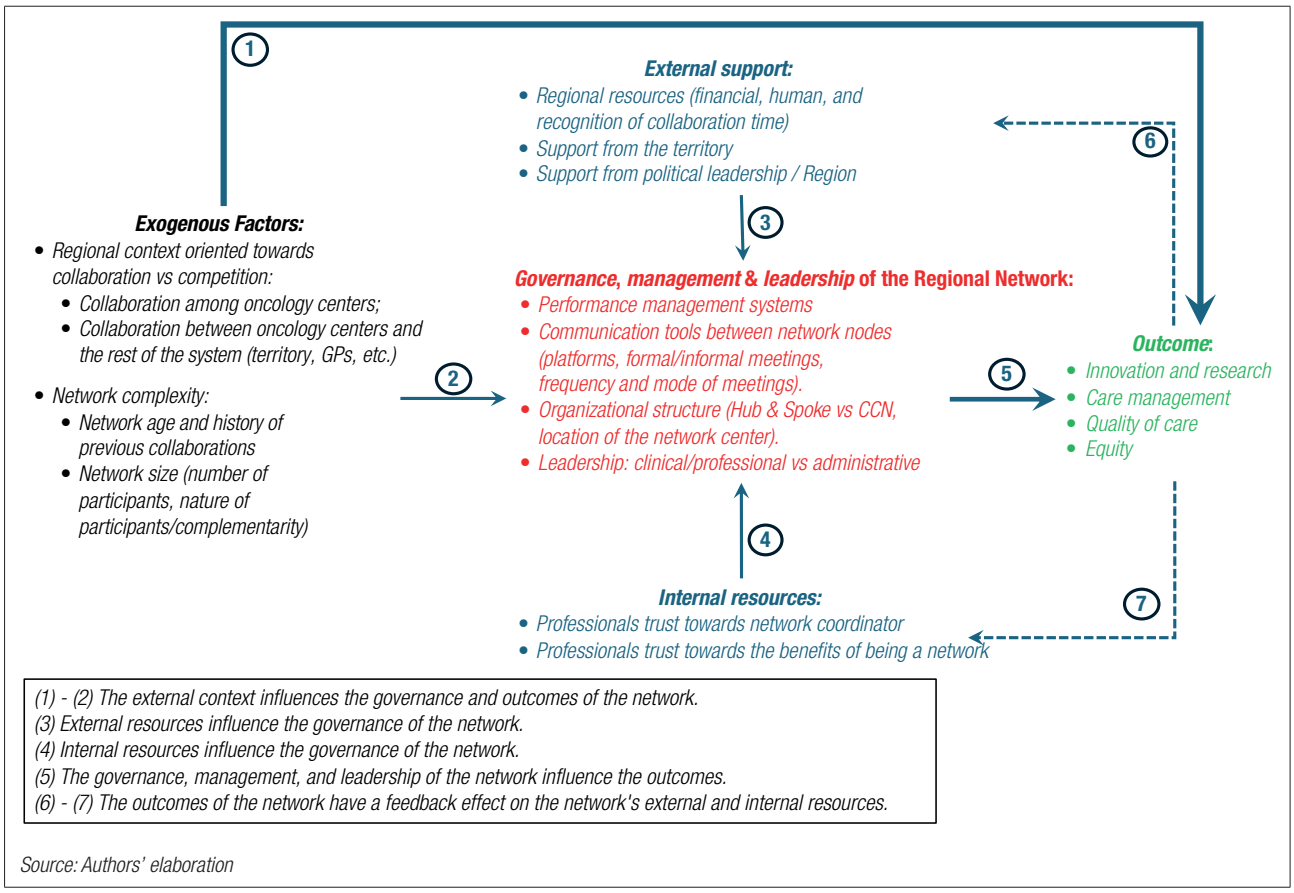
		Toscana	Piemonte - Valle d'Aosta	Campania
External Factors	Establishment	2010	2010	2016
	Regional Context	Strong political support for the network High propensity for collaboration among oncology centers	Strong political support for the network Propensity for network collaboration	Region under Financial Recovery Plan Strong regional support for the network
	Network Organizational Structure	CCCN All territorial and hospital health organizations with oncology organizational units	Hub & Spoke Criteria to identify Hub and Spoke centers are under development	CCCN 11 hospital facilities identified as CORP or Corpus; includes participation of accredited private facilities and general practitioners
External Resources	Network Funding	No dedicated funding	Dedicated funding available	Dedicated funding for setup and platform
	Dedicated staff	Administrative staff	Administrative staff	Administrative staff
Internal resources	Trust	High trust among professionals and towards the network coordinator	Good trust among professionals in working group	High trust in the benefits of the network

Network Management Characteristics	Governance	Oncology Network Coordination Body established at ISPRO, structured into:
		• Strategic Committee
		• Technical Committee
		  ○ Coordination of Oncology Departments
		  ○ Coordination of Oncology Screenings
		• Scientific Committee
			Structured into two bodies:
			• Central Coordination Authority:
			  ○ Coordinator responsible for strategic directions
			  ○ Hospital area coordinator
			  ○ Territorial area coordinator
			• Scientific Committee (9 members)
				• ROC Coordination (Istituto Tumori di Napoli Fondazione G. Pascale)
				• Scientific Director
				• Steering Committee (General Directors of all hospital and territorial facilities in the Region, representatives of pharmacists, Cancer Registry Director)
				• Technical table at the Regional Health Directorate

	Network Objectives	Defined by the Strategic Committee in the Multi-Year Guidance Document	Defined in the Three-Year Plan and in the Annual Activity Program	Indicators for PDTA, defined by the ROC coordination
	Communication Among Network Nodes	Meetings every 15 days of the Coordination of Oncology Departments Monthly meetings of the Coordination of Oncology Screenings	Monthly report sharing; Individual meetings with hospitals General Directors; annual meeting with all General Directors in the network; shared platform for the MTB	Shared digital platform among all network nodes
	Network activity monitoring	Conducted by governance bodies with support from the MeS Laboratory of Scuola Superiore Sant'Anna of Pisa	Indicators defined by the Scientific Committee, monitored with ad hoc requests to the hospitals	Indicators monitored every two months through the platform

Source: Authors' elaboration

Model for the governance of Regional Cancer Networks (ROR) Performance



Source: Authors' elaboration

The Tuscan Network, governed by ISPRO (Institute for Cancer Research, Prevention, and Clinical Network), has successfully strengthened hospital-territory integration. The success is supported by robust leadership and deliberate efforts to foster collaboration and communication among stakeholders, however, the Network faces challenges in aligning its goals with the independent strategic planning of the organizations that comprise it, creating coordination complexities. The Table below provides a detailed comparison of the characteristics of the three oncology Networks under study.

Analysis of Macro-Categories

The first Macro-Category focuses on exogenous factors, which include elements for which network managers or members have limited control. For example, a regional context characterized by a strong culture of collaboration can significantly enhance synergies among cancer units within the network's facilities. Similarly, effective collaboration between cancer services and other components of the healthcare system - such as community health services, general practitioners, and social services - is crucial for the success of the network.

Additional exogenous factors beyond the network's control include its complexity, determined by the number of members, its maturity (measured in years of operation), and the nature and complementarity of the participating facilities. These factors directly influence the network's capacity to achieve outcomes, such as improved patient care, higher quality of services, equity in access, and support for innovation and research. These outcomes, in turn, affect the availability of internal resources (the second Macro-Category). Internal resources are primarily defined by the level of trust within the network-both the trust professionals place in the network coordina-

tor and their confidence in the benefits of being part of the network. This trust is nurtured through clear and consistent communication, which enables continuous knowledge updates for members and promotes proactive responses to emerging challenges. communication, which enables continuous knowledge updates for members and promotes proactive responses to emerging challenges.

In a complex context such as oncology, where numerous actors interact, trust facilitates the timely exchange of information and aids in the clear definition of objectives while minimizing conflicts. This contributes to improving the efficiency and quality of the services offered to patients (Ferlie et al., 2011; Simmons et al., 2015). Another element that influences network outcomes is represented by external resources (the third Macro-Category), which include funding - essential for the development of technologies and IT infrastructure - , healthcare personnel, and the recognition of time dedicated to collaboration. External resources also include the support provided by local communities and regional political institutions to the network.

The three Macro-Category described (exogenous factors, internal resources, and external resources) influence the fourth Macro-Category of enabling factors, which consists of the governance, management, and leadership of the network. Network governance refers to the coordination of collective action by a central entity, aimed at optimizing the network's overall functioning. In the oncology field, network governance encompasses the set of rules, mechanisms, decision-making structures, and coordination practices necessary to effectively manage collaboration among the various stakeholders involved in delivering oncology care (Morando and Tozzi, 2014). Governance can be either centralized or distributed and may involve actors with different profiles and expertise.

Based on the governance models examined in the network literature (Provan and Kenis, 2008), the structures adopted in the oncology field are the CCCN model and the Hub & Spoke model. The first model corresponds to a self-governed network that employs a centralized approach to oncology care through various healthcare facilities integrated within a single network, aiming to provide comprehensive patient care. The second governance model is associated with the Lead Organization. This model involves a hierarchical structure in which a central facility (Hub) delivers specialized treatments and coordinates several peripheral centers (Spokes) distributed across the regional territory, which handle basic diagnostic and therapeutic activities.

The fourth macro-variable also includes the types of monitoring and evaluation systems of the network and the tools and communication methods adopted by the network's actors. Finally, the type and styles of leadership within the network are elements that affect the results. Leadership can be held by a figure with either clinical or administrative skills and plays the role of a facilitator. The leader guides the organizations involved toward a common mission, activating the necessary resources (Cunningham et al., 2012), harmonizing the interests of the various actors, and reducing conflicts (Simmons et al., 2015; Dominello et al., 2018). Along with exogenous factors, the Macro-Category of governance, management, and leadership of the Regional Cancer Network also significantly influences its outcomes.

Concluding remarks

The analysis reveals that the three contexts examined have developed models that, despite their significant differences, have achieved satisfactory results, though there is still a margin for improvement and development. Some of the challenges identified include a lack of human and financial resources, which vary in extent across the different contexts, as well as the varying speeds at which technological infrastructures - crucial for the network's proper functioning - have been implemented and adopted. The analysis model presented offers valuable insights for further research on cancer networks, focusing on the variables that influence their outcomes. The authors aim to conduct the research by applying the analytical model to all Regional Cancer Network in the country. The objective is to understand which combination of characteristics leads to positive network outcomes, defined in terms of patient care, quality

of treatment, equity, innovation, and research. The model could support the development of strategies to improve the functioning of oncology networks, to be discussed in a national level benchlearning and benchmarking forum for cancer networks. Such a forum would promote comparisons between networks, the sharing of best practices, and the exchange of expertise and knowledge, while ensuring the autonomy of each network's operations.

CHAPTER 4d

The state of the art of Digital Health in Italy: the main results of research carried out by the Digital Health Observatory of the Politecnico di Milano

Corso M.[1], De Cesare D.[2], Lettieri E.[3], Locatelli P.[4], Masella C.[5], Olive M.[6], Sgarbossa C.[7]

Italy has now entered the core phase of implementing the interventions outlined for digital healthcare in the National Recovery and Resilience Plan – as part of the NextGenerationEU program. In 2023, expenditure on digital health reached € 2.2 billion, representing 1.7% of public healthcare expenditure, with a 22.0% increase compared to 2022.

While awaiting the national Telemedicine infrastructures, the use of these tools by physicians remains substantially stable. Approximately 35% of specialist physicians and 43% of General Practitioners have used Televisit services, although the provision of these services remains mostly occasional.

Although the anticipated Italian EHR 2.0 is still being implemented, both doctors and patients can already access health records in all Regions. Over the past year, 35.0% of specialist physicians and 48.0% of General Practitioners have used the EHR, considering it a valuable tool that simplifies access to information and document review.

Artificial Intelligence is emerging as a growing trend of interest in healthcare, with the potential to support physicians in improving the accuracy and personalization of care, as well as making the monitoring of chronic patients more sustainable. Notably, while in 2023 the phenomenon of ChatGPT seemed to be more of a "media hype," it is now evident that awareness around Generative Artificial Intelligence has significantly increased among healthcare professionals and the general public.

Finally, the development of digital skills among citizens is crucial to ensuring an inclusive and sustainable adoption of digital healthcare services. Investment is needed in Digital Literacy, Digital Soft Skills, Health Literacy, and eHealth Skills to enable both patients and healthcare professionals to fully leverage available technologies, thereby contributing to a more equitable and participatory healthcare system.

[1] Osservatorio Sanità Digitale; Politecnico di Milano
[2] Osservatorio *Life Science Innovation*
[3] Osservatorio Sanità Digitale & *Life Science Innovation*; Politecnico di Milano
[4] Osservatorio Sanità Digitale
[5] Osservatorio Sanità Digitale; Politecnico di Milano
[6] Osservatorio Sanità Digitale; Politecnico di Milano
[7] Osservatorio Sanità Digitale & *Life Science Innovation*

CHAPTER 4e
Consip's role in procurement in the health sector: Tenders and innovative approaches

Carpentiere P.[1], Di Leva R.[1]

On behalf of the Ministry of Economy and Finance, Consip manages the most important Spending Restructuring Programmes, providing Public Administrations (PAs) with tools and services to promote evolution and efficiency in procurement.

In the health sector, over the last six years, the National Purchasing Centre has intermediated over € 25 billion of specific health expenditure, dealing with all the main product areas of the sector (medical devices, drugs, electro-medical and diagnostic equipment), through the use of increasingly innovative purchasing tools that meet the clinicians' and Administrations' needs.

The procurement of medical devices

The Prime Minister's Decree of 24 December 2015, implementing Article 9, paragraph 3, of Decree Law 66/2014, included for the first time implantable medical devices (e.g. stents, pacemakers, etc.) among the categories for which the obligation to purchase through Aggregating Entities applies, when certain value thresholds are exceeded.

From 2016 to date [2], in order to comply with regulations and make available to Administrations fast and efficient purchasing tools for the procurement of medical devices, Consip has published 21 tenders concerning the most commonly used medical devices in the surgical field for a total value of approximately € 2.4 billion.

The tendering procedures for medical devices have the essential aim of placing doctors' and patients' needs at the centre of the analysis of purchasing requirements. They share the following structural characteristics:

- *identification of minimum technical characteristics of access capable of ensuring high quality standards*
- *adoption of the criterion of the most economically advantageous tender, in order to prioritise the technical component of the tender over the economic one, while ensuring average award prices lower than those obtained through regional tenders*
- *use of the multi-supplier Framework Agreement instrument in order to give Administrations greater choice in the devices offered*
- *introduction of clinical choice to identify the devices that best meet patients' needs, irrespective of the final award ranking.*

These initiatives have met with appreciation from both the relevant Scientific Societies (GISE, SIC, SICVE, AIAC, ACOI), with which Consip collaborates through the signing of special confidentiality agreements, and from economic operators (constantly involved through sector associations and market consultation). The same holds true for Administrations, which use Consip Framework Agreements even when there are active regional tenders, thanks to the ease of joining, the high quality of devices, and the competitiveness of award prices.

The Dynamic System for the procurement of drugs

Introduced in 2011, Consip's Dynamic System (SDAPA) for the procurement of drugs enables Contracting Authorities to manage the purchasing process autonomously, through a free, fully online plat-

[1] Consip
[2] *Data updated at 30 September 2024*

form aligned to the Procurement Code, by launching Specific Tenders (STs) called by individual Administrations.

SDAPA is a two-phase procedure: in the first phase, Consip publishes the Establishment Notice and the Tender Specifications and manages the admission requests. In the second one, the Contracting Authority initiates and awards STs. In so doing, it is facilitated by the tools made available by Consip. In fact, SDAPA enables Administrations to benefit from a standard tendering architecture and simplified document templates that enable them to easily set up the negotiation environment and manage the evaluation and award phases more efficiently (e.g. automatically generated ST merit ranking), ensuring the transparency and traceability of the process.

Consip provides PAs with a list of active ingredients/pharmaceutical forms/doses ('Lot List Table'), which is the basis for the precise definition of lots.

The Lot List Table is "dynamic" in nature since, for the entire duration of SDAPA, it can be supplemented following requests from Administrations (subject to appropriate checks by Consip): initially consisting of around 2,500 combinations of active ingredient/pharmaceutical form/dosage, it has now come to include over 7,600.

The peculiarities of operation and ease of use of SDAPA for drug procurement have led to an exponential growth, over time, in the number of authorised economic operators, adhering Administrations and STs initiated.

In recent years, in fact, this tool has enabled 11 Regions and over 50 Local Authorities (ASLs, ASPs, AOs, etc.) to negotiate about 2,470 active ingredients, for a total of over 500 STs launched and a total amount tendered of about € 47 billion. This has allowed significant savings to be achieved while ensuring the simplification of the administrative process and the customisation of tenders according to the individual Administrations' needs.

Diagnostic imaging equipment

In the field of electro-medical equipment and diagnostic imaging systems, in particular, Consip is a point of reference for Administrations and Scientific Societies in the sector (AIFM, AIIC, AIMN, AIRO, SIEOG, SIRM, SIUMB), combining quality and innovation with competitive prices.

From 2015 to date, Consip has published 28 tenders in the field of equipment for a value of around € 2 billion and a total of over 7,700 items of equipment.

Consip also plays an active role in the equipment renewal process, through the study and introduction of innovative procurement methods (e.g. rental/pay-per-use) and facilitations for PAs requiring the disposal of obsolete equipment.

In dealing with the Diagnostic Equipment category, Consip has constantly innovated its approach, not only in terms of characteristics of the equipment being tendered for, but also from the viewpoint of the purchasing tool, the criteria underlying the subdivision into lots, and the way in which Administrations acquire it.

Also, in consideration of these factors, Consip has been identified by the Ministry of Health as a "strategic partner" for the implementation of the National Recovery and Resilience Plan (NRRP).

Among its objectives, the NRRP (Mission 6 - Health) has, in fact, envisaged an investment of € 1.19 billion for the digital modernisation of the hospital technology equipment, through the purchase of 3,136 new large pieces of equipment.

In this context, Consip supported the Ministry of Health in implementing the Plan, through the publication of 9 tenders, between the end of 2021 and 2022, which covered 87% of the total national requirements. As many as 230 Administrations out of about 250, in fact, expressly asked to use Consip's tools to carry out the above-mentioned tendering procedures for diagnostic equipment.

The equipment was made available through Consip Framework Agreements concluded with all participating Economic Operators in order to expand the range of solutions, ensure compliance with delivery times, and safeguard the production capacity of economic operators. The activity plan made it possible to make all the equipment envisaged by the NRRP available to the PA by the second quarter of 2023.

CHAPTER 4f
The National Health System staff

Di Luca V.[1]

The National Health Service (NHS) is currently facing a crucial challenge related to the ageing of population and of the healthcare staff. Italy is in fact the European country with the highest number of people over 65 (24% of the population) and doctors over 55 (55% of the total).

Therefore, in a context of growing demand for care, urgent measures are required to ensure generational turnover and a balanced distribution of staff, especially in the emergency-urgency and territorial care sectors.

In 2022, the year for which the latest official data is available, the National Health Service (NHS) had 625,282 employees. Specifically, the NHS employed 101,827 doctors and dentists (-1.23% compared to 2020) and 268,013 nurses (+1.26% compared to 2020).

With regard to territorial medicine, the number of General Practitioners (GPs) increased from 40,250 in 2021 to 39,366 in 2022, while the number of Primary Care Paediatricians (PLS) decreased from 7,022 in 2021 to 6,962 in 2022.

The NHS is facing a particularly acute shortage of medical staff in some care areas such as primary care medicine and, at hospital level, in emergency/urgency activities. Italy has also a significant shortage of nursing staff compared to the average of countries regarded as benchmarks such as France, Germany and Spain, especially in relation to the over 75 population, whose incidence continues to grow rapidly.

In 2021 Italy had 4.1 doctors per 1,000 inhabitants, a value in line with the average of the benchmark countries. However, a gap emerges when analysing active physicians per 1,000 inhabitants over 75: Italy records a value of 34.3, lower than the European average of 37.8, showing a deficit of 24,797 physicians compared to that target. The situation is worse for the nursing staff, with an estimated shortage of 182,993, which rises to 250,242 considering the population over 75.

As to territorial care, the number of GPs, which was 39,366 in 2022, has decreased over the last ten years by 6,071, from 76 GPs per 100,000 inhabitants in 2012 to 67 in 2022 (-11.8%, corresponding to a loss of 5,497 staff units). The average number of GPs per 100,000 inhabitants over 75 was 1,000 in 2012 and 550 in 2022 (-44.9%). In this case, 71,560 GPs would currently be needed to go back to 2012 levels, i.e. an additional 32,194 professionals should be integrated into the system.

With the increase in the number of places available for access to the degree courses in Medicine and Surgery from 10,035 in the academic year 2018/2019 to 20,867 in 2024/2025 (+108%), the problem of the so-called "training funnel" seems to have been overcome.

However, the problem of the distribution of contracts persists, with some specialisations that are less attractive than those offering more job opportunities in the private sector and in the private practice and freelancer professions. In recent years, less than half of the emergency medicine specialisation contracts have been awarded. In particular, the results of the 2024 specialisation competition show that only 304 out of 1,020 contracts in emergency-urgency medicine were assigned, i.e. just under 30%. This shows that the decision to increase the availability of

[1] *Medical Engineer* (www.linkedin.com/in/vincenzodiluca)

contracts (+17% compared to 2023) without proper planning and without a reform of medical training cannot lead to concrete results.

Despite the measures taken in recent years to tackle the staff crisis, the problem of the greater attractiveness of the private sector persists, due to higher average salaries and greater guarantees of flexibility. It is therefore crucial to invest in the NHS ability to attract healthcare staff, and to bring back some of those who have currently found a job abroad. Young doctors in Italy currently earn lower salaries and, given their age, show a greater propensity to move abroad. On a purchasing power parity (PPP) basis, doctors working in the public sector already earn 19% less during their specialisation than the average of their colleagues in France, Germany and Spain, and even 30% less at the end of their career.

Also for the Nursing degree courses, the available places have grown from 14,758 in 2018/2019 to 20,714 in the current academic year (+40.4%). Nevertheless, they are still insufficient, with a gap of about 20% compared to the needs estimated by the State-Regions Agreement. For these professionals, the problem is undoubtedly numerical, but there is also a severe lack of motivation. The ratio of applications to places is slowly approaching one: for the current academic year, the ratio is 1.03.

The underlying causes of this phenomenon are not easy to identify. The starting point could certainly be an economic and financial reason, faced with workloads that are considered very burdensome.

In relative terms, while the salary of a specialist doctor directly employed by the NHS is 2.6 times the national average salary, for nurses this ratio is 1. On the other hand, even in 2011 the average salary of a nurse was exactly the same as the Italian average salary, but in that case the ratio of applications to places for enrolment in nursing degree courses was 2.9.

In short, the NHS is operating in a context in which the management of human resources is a growing challenge, complicated by demographic and financial dynamics and trends. Our System has to protect the health of the population with a progressive ageing of the medical and nursing staff, as well as a shortage of new professionals, particularly in the less attractive specialisations such as emergency-urgency, which is essential for responding promptly to the needs of the population.

In the light of the challenges that have emerged, there is a clear need for a strategic approach that takes into account demographic changes and the evolution of the demand for care while ensuring a more targeted and flexible planning of the NHS human resources in order to ensure efficient and high-quality care for patients.

CHAPTER 4g
The professional evolution of the Social and Healthcare Worker: evidence from a survey

d'Angela D.[2], Peretto L.[1], Polistena B.[2], Sorrentino G.[3], Squarcella A.[4]

The issue of human resources in the National Health Service (NHS) is absolutely strategic for safeguarding it (19th C.R.E.A. Health Report) and has led to a wide-ranging debate that, over the past year, has focused on the issue of staff shortages.

Nevertheless, as reported by various sources, the problem of staff shortages needs to be framed, more generally, within staff management policies, which also involve (without claiming to be exhaustive) aspects of remuneration, skill mix, working conditions, etc..

In this perspective, the C.R.E.A. Health Report 2023 had, in particular, raised the issue of planning the need for Social and Healthcare Workers (OSS), emphasising that, in a country characterised by a strong presence of elderly and often non-self-sufficient people (see Chapter 1), that job profile was central to ensuring protection and assistance. That report also pointed out that the OSS availability in Italy was lower than the European average, unless we want to equate to OSSs the job profile of (non-professional) caregivers, who in fact currently are the main "subjects" for taking care of Italy's non-self-sufficient elderly population.

In order to provide support for staff policies on this specific segment, it was therefore decided to analyse the OSS perception with respect to the practice of the profession, as well as its prospective evolution, through a special survey conducted in cooperation with the National Federation of Social and Healthcare Professions (M.I.G.E.P.).

The survey was carried out using the Computer Assisted Personal Interview method, through the Qualtrics software, and was administered by the Federation to its members.

482 individuals responded to the survey, 18.9% of whom worked in the North-West, 12.2% in the North-East, 21.2% in Central Italy and the remaining 47.7% in the South. More than half of the respondents (59.3%) have been in service for less than 10 years, 24.9% for less than 20 years (10-20), 10.4% for less than 30 (20-30), 5.0% for less than 40 (30-40) and 0.4% for more than 40 years.

Similarly to what emerged from the survey addressed to medical staff, carried out last year in collaboration with FNOMCEO (19th Health Report), the answers show the respondents' widespread dissatisfaction with the current way of practicing the profession due, in particular, to the workloads, made more burdensome by staff shortages, and to dissatisfaction with salary aspects.

In the OSS case, dissatisfaction appears to be greater (although not markedly so) among those working in the private sector, probably reflecting the fact that public contracts continue to provide greater security and/or a more defined job profile classification. Analysing the answers to the questionnaire, we perceive that the qualitative and quantitative commitment required for the profession is not yet deemed sufficiently consolidated. This awareness is linked to that expressed by OSSs regarding the need for a homogenisation of the training processes and therefore of access to the profession.

In prospective terms, the profession does not yet

[1] *Member of the M.I.G.E.P. National Secretariat and founder of the M.I.G.E.P. Federation*
[2] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[3] *Representative of the OSS States General*
[4] *SHC National Secretary*

seem to be adequately informed of the emergence of the role of nursing assistant, and therefore has not developed its own position on the subject, as well as an idea on the definition of roles and tasks. The answers are fairly evenly divided between those who do not know the content of the new profile in depth, those who perceive it only as an opportunity and those, instead, as a threat.

In short, it appears evident that there is a need for reorganising the matter and paying greater attention to this job profile, as well as clarifying its "relations" with that of the nursing assistant. Moreover, also considering the trend of "specialisation" of nursing roles, OSS is in fact confirmed as the main "professional" for taking care of the non-self-sufficient people.

CHAPTER 5a
Performance indicators: impoverishment, "catastrophicity" and economic hardship. The equity levels of Italy's Health Service

d'Angela D.[1], Spandonaro F.[2]

The Chapter aims to assess the impact of care on families, analysing the healthcare consumption expenses they have to bear directly. The latest available evidence relates to 2022, and makes it possible to analyse the different areas of care, separately also by area of intervention: prevention, treatment and rehabilitation, Long Term Care. The analysis has also been supplemented with the social welfare component aimed at the elderly and/or disabled people.

The analysis of private expenditure also makes it possible to provide indications on the NHS actual ability to protect citizens against the economic risks deriving from illness, and on its resilience and sustainability over time. In particular, in continuity with the previous Reports, the incidence of the impoverishment caused by health consumption expenditure has been determined, as well as the incidence of "catastrophicity" (understood as the "excess of incidence" of health expenditure on family budgets), and of "new" relinquishments of consumption and, finally, the incidence of economic hardship caused by health expenditure.

The analyses have been carried out starting from the microdata of the ISTAT sample survey on "Household Expenditure", which from this year has adopted the new COICOP 2018 classification (Classification of Individual Consumption by Purpose), disaggregating the data processed on the basis of the household consumption quintile, the Region of residence and the type of household.

In 2023 total household consumption grew by 4.3% in nominal terms, although in real terms consumption shrank by 1.5%.

Last year the average health consumption per household grew by 3.8%, after having remained unchanged between 2021 and 2022.

In 2022 (the last year available to carry out disaggregated analyses) 73.5% of Italian households made healthcare expenses (privately), which increased proportionally with the increase in the households' ability to consume. They were mainly borne by young couples (85.9%) and the over 75s without children (80.8%), while fewer were those who incurred healthcare expenses among the under 65s living alone (58.1%) and foreign households (60.9%).

The incidence of health expenditure for households in the lowest consumption quintiles reached 5.7%, while it was 4.6% for those in the last quintile.

The first expenditure item is drugs, which are purchased by 70.8% of households, followed by preventive specialist visits outside the treatment pathway (for 30.2% of households), and by the specialist services related to the treatment and rehabilitation pathway, purchased by 18.2% of households.

The analysis of consumption shows that the share of households spending on specialist and dentist care increases with their financial means.

Medicines and specialist care account for more than 60% of the burden for elderly people (living alone or in couples), while for families with children, spending on dental care is the second item after medicines, followed by specialist care.

The actual average expenditure, calculated only for the households that incur it, amounts to € 1,848.2 per household per year, and accounts for 5.5% of these households' consumption.

Alongside the purely health-related expenditure,

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[2] *University of Rome* "Tor Vergata", C.R.E.A. Sanità

there is also the expenditure incurred for social welfare services, which, according to the ISTAT survey on household consumption expenditure, is borne by about 260,000 households and amounts to € 2.3 billion.

Average household expenditure remained substantially unchanged last year, but the aggregate amount provided by ISTAT forecast a 4.3% increase for the year 2023.

This phenomenon is associated with that of people giving up spending on healthcare, which affects 1.2 million households (2.4 million citizens), particularly the poorest ones.

In terms of distribution of expenditure by type, it is worth noting that the incidence of spending on specialist visits for preventive purposes (outside the treatment pathway) does not change with the households' spending power, settling at around 20%. The dynamics and trends analysed suggest the existence of a propensity/need for households to bear expenses directly to have access to treatment and care pathways (or bring it forward).

In 2022, 3.4 million households stated they had reduced their healthcare expenses for economic and financial reasons, and 1.17 million of them did not actually incur them at all: hence giving up treatment and care for economic and financial reasons affects 4.5% of households (2.4 million citizens).

Mainly those living in the South of Italy (5.9% of households) give up spending on treatment and care, followed by those in the North-West (4.3%), the Centre (3.9%) and the North-East (3.3%).

A further 67,150 households (0.3% of the total) are at risk of giving up treatment and care, i.e. they have declared they have in any case reduced their healthcare expenses and are impoverished, or have fallen below the poverty line as a result of such expenses.

Those living in the South are most at risk: 0.7% of households, households with three or more children (1.7%) and elderly couples over 75 (0.7%).

In 2022, the impoverishment caused by private healthcare costs affected 374,198 Italian households (1.4% of households and, indeed, 1.9% if we consider only those incurring healthcare costs).

The impact in the South of Italy is almost four times that recorded in the North of Italy and more than double that recorded in the Centre.

Impoverishment mainly affects elderly couples over 75 (2.6% of those spending privately), the elderly people living alone (2.1%) and families with three or more children (2.6%).

A further 52,973 households (0.1%) are at risk of impoverishment, i.e. a 10% increase in their current level of health expenditure would place them in a state of poverty. 0.7% of households in the Centre that spend privately on healthcare and 0.3% of those in the South are at risk.

Adding to impoverishment the fact of giving up spending on healthcare, there is an "economic hardship due to health expenditure" affecting 1.6 million households (3.4 million citizens).

The incidence of the phenomenon is significantly higher in the South of Italy (8.7%), peaking in Campania, while the lowest incidence is in Liguria.

It particularly affects foreign families, couples with three or more children, and single-member households where the person is under 65 years of age.

The strong correlation existing between hardship and material and social deprivation should be noted, despite the fact that such individuals should be protected, for example, through exemptions from cost-sharing.

Approximately 95,000 households are at risk of economic hardship due to healthcare expenditure. These are the households at risk of giving up healthcare and/or impoverishing (0.9% of those living in the South who spend privately on healthcare and 0.5% of those living in the Centre).

The phenomenon of "catastrophicity" affects 8.6% of households (11.8% of those incurring healthcare costs), i.e. 2.3 million households. It mostly affects the South of Italy and the North-East, as well as the elderly people, living alone or in couples, and all the consumption quintiles, and particularly the central ones. Dental expenses are the most frequent cause.

To summarise, all the equity indicators processed show a situation of continuing and growing inequity in Italy's health system, albeit with significant variability at regional level.

CHAPTER 5b
Health Protection Opportunities: Regional Performance

d'Angela D.[1], d'Angela C.[2], Carrieri C.[1], Polistena B.[1], Spandonaro F. [3]

Chapter 5b summarises the study Opportunities for Health Protection: Regional Performance, promoted by C.R.E.A. Sanità in 2012, in order to provide a contribution to the definition of health and social policies, with the ultimate goal of improving the opportunities for social and health protection (in the broadest sense) provided in the various Regions.

The methodology adopted recognises the multidimensional nature of Performance, as well as the existence of different perspectives of the socio-health system on the part of stakeholders. The assessment is supported by a "multi-stakeholder" Expert Panel in which 104 representatives of Institutions, Corporate Management, Health Professions, Users and the Medical Industry currently participate.

The single Performance Index is determined on the basis of the methodology developed by C.R.E.A. Sanità, described in the previous Reports. In particular, the Panel is called upon to:

- *identify the Performance Dimensions*
- *identify a set of indicators representative of the aforementioned Performance Dimensions*
- *elicit the "value" attributed to the indicators determined*
- *elicit the "relative value" attributed to the different indicators*
- *process data from the synthetic Performance Index, according to the different perspectives and the relative contribution of the different Dimensions.*

Besides measuring Performance, this year its dynamics in the medium term (last five years) has been determined.

Furthermore, in the 2024 Report (12th Report), the Panel has also proceeded to select a subset of indicators specifically chosen for the future monitoring of the impact of Differentiated Autonomy (DA) in Healthcare. These indicators at carrying out an initial test useful for evaluating the "direction" of the impact of any institutional changes, as well as identifying any criticalities in the national, regional and local "levels" of governance.

Specifically, the Panel has selected a subset of ten indicators from the complete set of indicators for measuring Performance.

The proposed methodology envisages to measure the impact of DA based on a comparison of the dynamics gap in the different groups, when DA is granted, before and after its introduction, thus measuring its impact.

In particular, the dynamics - for each indicator and for each of the two groups of Regions - are compared in various ways, and then further summarised in a single average variation - "simple" or weighted with the "weights" attributed by the Panel to indicators - identified as the "Weighted Synthetic Index" (WSI).

This index can assume a value ranging between -1 and 1 and is representative of the ratio between the areas of worsening and improvement in the period under consideration. A value of 0 is indicative of an overall offsetting between regional improvements and worsening. A positive value is indicative of a prevalence of improvement, and a negative value of a prevalence of worsening (1 and -1 in the case when only improvements or worsening are recorded,

1 C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
2 C.R.E.A. Sanità
3 *University of Rome* "Tor Vergata", C.R.E.A. Sanità

respectively).

The 2024 evaluation of the Regional Performance - in terms of opportunities for social and health protection provided to citizens - ranges from a maximum of 60% (considering 100% the best attainable result) to a minimum of 26%: the best result is reached by Veneto and the worst by Calabria.

In the Panel's opinion, it is confirmed that Regional Performance levels are still significantly far from reaching an optimal target.

The gap between the best and the worst performing Region is decidedly significant: one third of the Regions does not reach a level equal to 40% of the maximum attainable result.

Qualitatively, four groups of Regions are identified in the ranking: four Regions, namely Veneto, Piemonte, Autonomous Province of Bolzano and Toscana, achieve overall protection levels that are significantly better than the others, with a Performance Index that exceeds 50% of the maximum (60.2%, 55.3%, 53.6% and 52.9%, respectively).

Friuli Venezia Giulia, Autonomous Province of Trento, Emilia Romagna, Liguria, Valle d'Aosta, Marche and Lombardia record fairly homogeneous Performance Index levels, ranging between 50% and 45%:

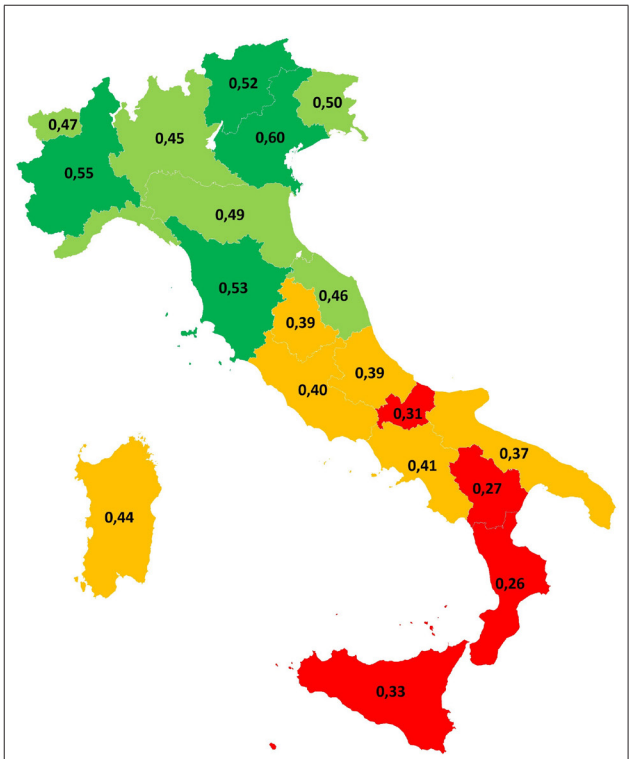
Sardegna, Campania, Lazio, Umbria, Abruzzo and Puglia have Performance levels in the 37-44% range.

Finally, Sicilia, Molise, Basilicata and Calabria record Performance levels below 35% of the maximum attainable result.

The Appropriateness, Outcomes and Social Dimensions account for more than 60% of Performance: 26.6%, 23.9% and 16.2%, respectively, followed by the Innovation Dimension (11.4%), while the Equity and Economic-Financial Dimensions account for 11.2% and 10.7%, respectively.

Although with some substantial quantitative differences, Outcomes and Appropriateness (the latter with the exception of the representatives of Institutions) are in the first three positions of the ranking for all stakeholder categories; the same holds true for the Social Dimension, with the exception of the representatives of Company Management.

Performance Index (0: worst Performance; 1: best Performance)



Source: data processed based on preferences expressed by the Panel - © C.R.E.A. Sanità

The Equity Dimension ranks fourth place for all stakeholder categories and the Economic-Financial Dimension is in the last two positions for all categories, with the exception of Corporate Management, for which it ranks second place after Appropriateness.

Compared to the previous Report, there has been a considerable reduction in the "weight" associated with the Equity Dimension, equal to -10.9 percentage points (p.p.). The weight of the Economic-Financial Dimension also decreases further (-1.4 p.p.), while the Innovation Dimension remains almost constant (-0.1 p.p.). The contribution of Outcomes, Appropriateness and Social Dimensions increases in a complementary manner (+10.1, +1.7 and +0.5 p.p., respectively).

The dynamics of "weights" with respect to the previous Report, - particularly the increase in Outcomes, Appropriateness and Social Dimensions - seems to be related to the fact that, in an evolving

organisational model (DM 77, NRRP, etc.), the priority appears to be monitoring Outcomes and Appropriateness of care in the out-of-hospital setting (Integrated Home Care, etc.).

On the other hand, the fact of Health Agencies' managers "including again" the economic dimension among the priorities on the agenda may be related to the management difficulties arising from the limited resources.

At the national level, compared to an overall level of Performance (obtained by averaging the Performance indices of the individual Regions) equal to 43.8% of the theoretical optimal value, there has been a 46% improvement over the last five years. This improvement has affected all the Regions, mainly those of the South (+75.9% on average), followed by those of the North-East (+44.9%), the North-West (+40.9%) and the Centre (+37.4%).

In recent years, therefore, the gaps in terms of health protection opportunities between the North and the South of Italy seems to have been bridged significantly. On the other hand, it should be noted that despite the Panel's finding that the current level of Performance is still far from reaching optimal values, it does not seem that the Regions with better Performances are able to record significant progress. This probably indicates the existence of structural limits in the current structure of the healthcare system.

Finally, an extension of the evaluation methodology has been tested, with a view to monitoring the dynamics of Performance indicators recorded in different groups of Regions.

The exercise conducted is preparatory and conducive to the implementation of a process to monitor the effects of Differentiated Autonomy in Healthcare.

By adopting the perspective whereby the key factor for evaluating the effects of DA will be the expectation that all the Regions will pursue a process of improvement - or at least not record a worsening process due to the risks of autonomy becoming more competitive than cooperative - a method for monitoring the effects that will be recorded after the recognition of DA to a group of Regions has been described and tested.

Pending the clarification of the terms of access to DA, the monitoring and evaluation system has been exemplified with three comparisons between different types of Regions. It is believed that, in perspective, it can be a support to social-health planning, thus providing indications both on the "direction" of the impact of any institutional changes, and on the possible areas of action, at the national, regional and local "levels" of governance.

In summary, Chapter 5b provides a measure of Regional Performance in the area of social and health protection, as well as its dynamics over time.

It also demonstrates the implementability of a system for monitoring and evaluating the impact of DA, which is believed may prospectively be a support for evaluating any institutional changes.

CHAPTER 5c
Measuring the Efficiency of Hospitals

Carrieri C.[1], Polistena B.[2], Spandonaro F.[1]

The issue of the efficiency of the National Health System (NHS), and of its facilities, is one of the central themes in health policy analyses. The issue of measuring the technical efficiency of facilities, however, is still "pending", largely due to the complex problems of comparing the activities performed by them.

The Chapter aims to provide indications - albeit '"indirectly" - on the efficiency of Italian Hospitals, comparing the costs borne with a "standard product" measure.

The analyses have been carried out starting from the information on hospitalisation and in-patient services contained in the Hospital Discharge Cards, as well as from the costs and revenues recorded in the Health Units' Profit and Loss Accounts (CE), and from the cost items of the Levels of Care (LA).

To make the hospitalisation and in-patient services provided more comparable, they have been turned into a standardised measure, defined "DRG point", developed on the basis of the different financial commitment entailed by hospitalisations and in-patient services.

Specifically, the "DRG points" have been determined by comparing the tariffs and rates in force for hospitalisation with the average rate per ordinary hospitalisation in acute cases, as resulting from national cases, equal to € 4,096.4.

As far as the numerator is concerned, the LA share of "Total Hospital Care compared to Overheads", applied to the CE item relating to the Total Production Costs (BZ9999) has been considered for costs.

Furthermore, the Revenues from hospitalisations and in-patient services obtained from the sum of the CE items "Revenues from Hospitalisations and In-patient Services (AA0350 and AA0460)" and "Revenues from Hospitalizations and In-patient Services from Private Facilities. and extra-regionally (Active Mobility) (AA0620)" have been considered.

The approach suffers from the limits imposed by the risks of distortion deriving from the failure to update tariffs and rates, and from the actual impossibility of separating all the different activities carried out in the facilities (ordinary hospitalisation versus day hospital services, research and teaching, etc.).

The analyses have been carried out on the data relating to Hospitals, University Hospitals and public Scientific Institutes for Research, Hospitalization and Healthcare (IRCCS), for a total of 67 facilities located throughout the country: the choice is due to the fact that they have been considered to be more comparable.

The cost per "DRG point" is € 9,685.5 (median value equal to 8,160.8), while the revenues for hospitalisation and in-patient services per "DRG point" average € 4,832.0 (median value equal to 4,590.2).

The variability among facilities is wide: the cost per "DRG point" varies from a minimum of € 4,832.9 to a maximum of € 24,776.6 with a ratio between the maximum and minimum values equal to 5.13.

Similarly, the variability is wide also when using the indicator of revenues for hospitalisations and in-patient services per "DRG point", which rises from € 4,102.5 to € 9,122.1 with a ratio between the maximum and minimum values equal to 2.22.

[1] *University of Rome* "Tor Vergata", C.R.E.A. Sanità
[2] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"

Considering the average rate acknowledged for ordinary hospitalisations in acute cases, it emerges that no facility has a cost of production per "DRG point" equal to or lower than the average rate. Only three facilities (4.5% of the total) have a cost per "DRG point" lower than or equal to the average rate increased by 50%. 13 facilities (19.4% of the total) have a cost per "DRG point" lower than or equal to the average rate increased by 75%, and about half of the facilities (50.7% of the total) have a cost per "DRG point" lower than or equal to twice the average rate.

Even with the caveats expressed about the limits of the analysis, the data therefore seems to confirm the existence of widely differing levels of technical efficiency between facilities.

Assuming that the cause of the variability of the cost per "DRG point" is technical inefficiency, and assuming that the Health Units that record a cost per "DRG point" greater than the median one align themselves to the latter value, the costs of hospital production could be reduced by 16.7% (€ 2.8 billion).

CHAPTER 5d
Avoidable mortality: taking stock of two years of pandemic

Buzzi N.[1]

As the joint OECD/Eurostat paper on the subject emphasises, the study of avoidable mortality does not fully cover the exercise to measure the Performance of a health system. The indicators on deaths from preventable or treatable causes of death, however, is a valid tool for assessing the impact of public health strategies, both in terms of causes of death that can be countered with primary prevention and those that can be reduced with early diagnosis, timely treatment and other forms of care.

As already pointed out in previous CREA Reports, the analysis and interpretation of data pose difficulties linked to many variables, including pre-existing ones and not necessarily linked to the Covid-19 pandemic.

In view of simplifying the analysis of trends, the AVM(i) Project classifies deaths directly attributed to Covid-19 as a separate item, so as to compare homogeneous groups over the period analysed [2].

The ISTAT analysis of the 2021 data on deaths by cause shows that the share of avoidable mortality measured as mentioned above records values close to those recorded in 2019 after the relatively small increase recorded in 2020.

Of the 173,000 deaths occurring in the population aged 0-74 (the reference age bracket for studying avoidable mortality), 56% (96,800 cases) are related to preventable or treatable causes of death and, in particular:

- *48,000 cases (of which more than two thirds regard males) are related to smoking, alcohol and inappropriate lifestyles, in general;*
- *8,400 cases (of which more than three-quarters regard males) are caused by accidents and suicides,*
- *32,800 cases (equally divided between males and females) are related to shortcomings in secondary prevention (early diagnosis and treatment).*

The significant difference in the impact of preventable mortality by gender and territory is even more evident if we analyse the values recorded at regional level, shown in the figure, which is based on standardised days lost per preventable mortality per-capita (gvp) [3].

In the graph, which shows that the range of the indicator relating to treatable causes is almost superimposable (4-9 gvp), while the scale inherent in preventable causes, for males, is noticeably shifted towards higher values, some peculiarities can be seen, including, for example:

- *that, in the case of males the regional values have a greater dispersion around the national average values;*
- *that, for both genders and for both types of death, Campania and Sicilia are characterised by values higher than the national average (top right quadrants), in contrast to Trentino Alto Adige and Veneto (bottom left quadrants);*
- *that some local realities show discrepancies between males and females or between the two categories of avoidable deaths. In Sardin-*

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[1] Nebo ricerche PA

[2] *On the portal dedicated to AVM(i) - Avoidable Mortality (with intelligence) (www.mortalitaevitabile.it) data and indicators of general and avoidable mortality by cause, age and gender, from 2011 to the last year for which data is available, are published*

[3] *Indicator adopted for the AVM(i) classification, which provides a measure of the time not lived (lost) by those who die from avoidable causes compared to their life expectancy (expressed in days per-capita on the population and standardized), amplifying the result for the territories where, with the same mortality, the age at death among avoidable deaths is lower.*

ia, for example, the data on female avoidable mortality is close to the national average, and so is the data on male avoidable mortality. A more detailed geographical breakdown (Provinces) makes it possible to identify further inhomogeneity even within individual Regions, just as the breakdown of large groups of causes makes it possible to capture the extent of the contribution (and any variation over the years) made by individual causes of death.

Historically, the quantification of avoidable mortality in Italy has always shown significant geographical variability, the interpretation of which is even less facilitated by the impact of the recent pandemic.

While, in some cases the direct or indirect effects of Covid-19 on general and avoidable mortality are easily recognisable (e.g. the reduction in mortality from road accidents during lockdown periods), in other cases it is more difficult both to quantify these effects and to trace their correlation and causality.

CHAPTER 6a
Prevention: evidence on lifestyles and major health risk factors, the situation in Europe

Giordani C.[1]

The health emergency caused by the Covid-19 pandemic has better highlighted that public health interventions are crucial to a country's economic and social development, and that community health depends on each and everyone's health.

The increasing attention that is being paid globally to the promotion of healthy lifestyles, the management of risk factors (such as smoking, alcohol, unhealthy diet habits, obesity, sedentariness, air pollution) and the prevention of chronic diseases, is essential to reduce the overall health burden and improve people's quality of life. All this, within the framework of a 'One Health' vision, which regards health as the result of harmonious and sustainable development of humans, nature and the environment. Recognising that the health of people, animals and ecosystems are interconnected, 'One Health' promotes the implementation of a coordinated, multidisciplinary and cross-sectoral approach to address potential or existing risks arising from the interface between the environment, animals and ecosystems.

Many scientific studies have highlighted the importance of prevention and health promotion in reducing disease incidence and mortality, as well as in improving people's quality of life, with direct benefits also on the costs for the italian National Health Service (NHS) and society at large.

Prevention activities must focus on actions shared between different sectors of society, with particular reference to modifiable behavioural risk factors and social, economic and environmental determinants, without neglecting the importance of early diagnosis, vaccinations and the fight against inequalities.

The Chapter analyses data referring to the areas under consideration - taken from a number of national and international sources - in view of defining Italy's positioning within the European Union, without claiming to be exhaustive and with all the limits deriving from the differences between the various health systems and the different time windows for which data is available, as well as the various sources used.

In a nutshell, for the year 2022 (or the nearest one, depending on the data available), the exercise carried out shows that Italy:

- *is in line with the EU average values for:*
  - *smoking: the share of people aged 15 years and over who smoke tobacco every day is 19.8% in Italy and 19.9% in the EU-27 (people aged 18 and over); the range goes from 8.7% in Sweden to 29.1% in Bulgaria;*
  - *illegal drugs: the share of young people aged 15-34 years who report having used cocaine in the last year is 2.1% in Italy and 2.2% in the EU-27; the lowest value (0.5%) is recorded in Portugal, while the highest one (5.5%) in the Netherlands;*
  - *routine children's vaccinations: the immunization coverage against diphtheria, tetanus and pertussis in children within the first year of age is 95.2% in Italy and 95.0% in the WHO European Region; the range goes from 83.5% recorded in Austria to 99.9% recorded in Hungary;*
- *is better placed than the EU average with regard to the following indicators:*
  - *alcohol: alcohol consumption among people aged 15 years and over is 7.7 litres*

[1] *Economist. The author writes in a personal capacity and not on behalf of the organization to which he belongs*

per-capita in Italy and 10.2 litres in EU-27; the lowest value (6.3 litres) is recorded in Greece, while the highest one (11.9 litres) in Latvia;

- *adult obesity: the share of people aged 15 and over who declare themselves to be obese is 11.4% in Italy as against 16.5% of the EU-27 average (people aged 18 and over); the range goes from 10.5% in Romania to 24.0% in Finland;*
- *diet: the share of people aged 15 and over who eat vegetables daily is 58.5% in Italy and 50.9% in the EU (people aged 18 and over); the lowest share (17.4%,) is recorded in Romania, while the highest one (75.9%) in Belgium;*
- *flu vaccination: the vaccination coverage against seasonal influenza in the elderly people aged 65 years and over is 58.1% in Italy and 48.2% in the EU-27; the range goes from 5.6% in Slovakia to 78.0% in Denmark;*

- *is in a worse position than the EU average with regard to:*
  - *physical exercise: the share of people who never practice physical exercise or sports is 56.0% in Italy and 45.0% on average in the EU; the range goes from 8.0% in Finland to 73.0% in Portugal;*
  - *environmental pollution: the share of early deaths due to environmental pollution by PM2.5 particulate matter is 79 per 100,000 inhabitants in Italy and 57 in the EU; the highest and lowest values are recorded in Finland (3) and Bulgaria (157);*
  - *cancer screening: adherence to organised screening programmes by the target population:*
    - *Breast cancer screening (mammogram): 53.5% (Italy) vs. 56.8% (EU-16); minimum value: 28.5% (Slovakia), maximum value: 83.0% (Denmark);*
    - *cervical cancer screening: 40.2% (Italy) vs. 50.5% (EU-16); minimum value: 4.5% (Romania), maximum value: 78.8% (Sweden);*
    - *colorectal cancer screening: 34.0% (Italy) vs. 45.8% (EU-13); minimum value: 8.1% (Hungary), maximum: 77.3% (Finland).*

Prevention can have a significant economic impact.

For example, considering that the WHO recommends that adults engage in at least 150 minutes of moderate-intensity aerobic physical exercise or at least 75 minutes of vigorous-intensity aerobic physical exercise (or a combination of both) per week, it can be estimated that, if everyone complied with these guidelines, approximately 18,000 deaths per year could be avoided in the EU. Furthermore, the OECD estimates that life expectancy in insufficiently active people would increase by 7.5 months, thus raising average life expectancy for the total population by almost 2 months.

Increasing physical exercise levels to the projected targets would also prevent 11.5 million new cases of non-communicable diseases by 2050, including 3.8 million cases of cardiovascular disease, 3.5 million cases of depression, nearly one million cases of type 2 diabetes and more than 400,000 cases of cancer, saving almost € 8 billion annually (PPP).

Achieving 300 minutes of moderate-intensity physical exercise per week would increase the life expectancy of currently physically inactive people by almost 16 months and could prevent 30,000 early deaths per year and 27 million new cases of non-communicable diseases over 30 years, thus reducing healthcare expenditure by € 17 billion per year (PPP).

All in all, while acknowledging the results achieved by Italy thanks to the growing focus on health promotion and prevention - demonstrated by the indicators that, in some respects, see Italy in a better position than the EU average - the need to keep on investing in the sector is nevertheless confirmed, in view of improving health outcomes and equity and, last but not least, pursuing the sustainability of the health system.

CHAPTER 6b
Consumption and National Health Service expenditure on immunisation

Polistena B.[1], Spandonaro F.[2]

Immunisation programmes are one of the core activities of public healthcare, but they are still failing to achieve their goals, with many vaccinations remaining below internationally recommended thresholds.

The Chapter therefore analyses the available evidence on immunisation activities and the dynamics and trends of consumption and expenditure related to vaccinations.

In the absence of significant changes in the regulation of the sector, we have focused, in particular, on estimating the optimal consumption and expenditure targets to be achieved in order to comply with the objectives of the National Vaccine Prevention Plan (PNPV), simulated by means of a special model developed by C.R.E.A. Sanità.

We merely point out that the requirements for the vaccine activities included in the Essential Assistance Levels (LEA) are funded within the "Collective Prevention and Public Health" LEA. Besides the pharmaceutical burden, it also includes the coverage of all the costs connected with immunisation, such as the costs of administration and, in general, the activities of the Departments of Prevention for vaccinations (for example, the management of vaccination registries).

Since vaccines are included in the "Prevention" LEA, they do not therefore contribute to the burden subject to the pharmaceutical expenditure ceiling.

In terms of expenditure and consumption, according to the OsMed 2023, published by the Italian Medicines Agency (AIFA), there is a consumption of vaccines equal to 1.2 DDD per 1,000 inhabitants, up 1.7% compared to 2022. At a regional level, consumption ranges between 1.0 (Valle d'Aosta, Basilicata and Sardegna) and 1.6 (Molise) DDD per 1,000 inhabitants, with a differential between the extremes of 1.6 times.

Per-capita expenditure on vaccines was € 712.2, with a 11.8% increase compared to 2022. Per-capita expenditure increased from € 10.8 in 2022 to € 12.1 in 2023 (+12.0%); compared to 2014 (€ 4.8), the average annual growth was 10.8%.

At the regional level, per-capita expenditure ranges between € 8.5 (Basilicata) and € 17.0 (Autonomous Province of Trento), with a differential between the extremes of 2.0 times.

Hence he average cost per DDD stood at € 27.9, up 9.8% in the last year (€ 25.4 in 2022); compared to 2014 (€ 8.4), the average annual increase was 14.3%.

The average cost per DDD differs greatly depending on the vaccines and also at regional level, where it ranges between € 22.3 in Toscana and € 33.0 in Veneto, with a differential between the extremes of 1.5 times.

In more general terms, the NHS expenditure on surveillance, prevention and control of infectious and parasitic diseases (which includes vaccination programmes) amounted to € 2.2 billion in 2022, of which € 1.4 billion (62.8%) on vaccinations; overall, it accounts for 33.0% of expenditure on prevention and public health, ranging from € 16.4 in Liguria to € 60.7 in Lombardia.

Hence, although combining data from different sources and, therefore, not necessarily perfectly comparable, it may be estimated that expenditure on

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[2] *University of Rome* "Tor Vergata", C.R.E.A. Sanità

vaccines accounts for about 50% of expenditure on vaccinations (on which, for example, administration, charges for vaccination centres, etc. also have an impact).

Finally, thanks to a model specially developed by C.R.E.A. Sanità, the targets of the 2023-2025 PNPV have been applied to the regional population by age, estimating the expected "optimal consumption" of vaccines. The expected expenditure has then been estimated by evaluating the target DDDs with the average cost per DDD of the individual vaccines, based on OsMed data.

Based on the assumptions made and on the briefly described algorithm, it is estimated that the doses administered are lower than those expected to reach the 2023-2025 vaccine schedule targets by 17.5%, net of the coverage of subjects at risk, for whom additional 2.5 million doses would be needed. This holds true even assuming prudentially that the vaccination of subjects at risk would be spread over 30 years. Overall, 23.7% of doses would therefore be lacking.

In terms of expenditure, again net of the expenditure on vaccines to be administered to groups at risk, the expected amount would be a total of € 785.5 million, as against a lower actual expenditure by 18.9%. Considering also fragile subjects, for whom an additional € 94.8 million in expenditure would be required, the "shortfall" would be 27.7%, equal to a further requirement of € 243.5 million.

The Chapter ultimately shows that in Italy we are witnessing a progressive and continuous growth in the consumption of vaccines, matched by an increase in total expenditure and average costs per DDD.

From the data on the charges for the surveillance, prevention and control of infectious and parasitic diseases (which includes vaccination programmes), it can also be inferred that vaccines account for about 50% of the expenditure on vaccinations (while the rest is accounted for by administration and, in general, by the charges for vaccination centres).

The model developed by C.R.E.A. Sanità finally estimates that only the Autonomous Province of Trento, Umbria and Molise come close to the levels of "optimal" consumption and that, among the largest Regions, the best "performing" are Puglia, Toscana, Emilia Romagna and Lombardia, while at the other extreme there are Piemonte, Valle d'Aosta, Sardegna and the Autonomous Province of Bolzano.

With specific reference to expenditure, the Autonomous Province of Trento and Veneto spend more than what the model forecasts as the optimal reference, and Emilia Romagna is the Region that comes closest to the reference, while Valle d'Aosta, Sicilia, Campania, Marche and Abruzzo spend significantly less than expected.

Ultimately, while bearing in mind the limitations of the model and the nature of mere 'theoretical' simulation of the exercise carried out, the doses currently being administered are estimated to be lower than those expected to achieve the vaccine schedule targets by 17.5%, net of consumption for the population at risk, and by 23.7% considering them. Expenditure, in turn, would be 18.9% lower than needed (27.7% lower, considering the population at risk). This suggests an additional requirement of € 243.5 million, but also the need for rationalisation aimed at reducing the significant regional variability.

CHAPTER 7
Residential care

Carrieri C.[1], d'Angela D.[1]

The Chapter analyses the evolution of the hospitalisation activity in Italy, by making a comparison with the main indicators of other European countries.

In particular, the dynamics and trends recorded in the sector over the last decade have been analysed, specifically in terms of (medical or surgical) case history of hospitalisations and nature of the facilities providing services (public or private ones working under an agreement with the NHS).

International comparisons show that Italy is the European country with the lowest recourse to hospitalisation, vbut recording one of the highest average length of stay. This can be explained by a greater selection of patients, in the sense of an attitude to favour access only to the most severe patients, in line with the low hospitalisation rate, together with the demographic data that sees Italy as the second oldest country in Europe.

In the last decade (2012-2022) there was a 25.4% reduction in hospitalisations for acute cases, which mainly affected those in the day hospital regime (-37.5%). Ordinary hospitalizations (equal to 77.3% for acute cases, with a 4.4% increase in the last decade) recorded a smaller reduction, equal to 20.5%.

When analysing the case history of ordinary hospitalizations by type of facility providing services, we can note that over 73% of them are in public facilities and 27% in private facilities working under an agreement with the NHS. At the regional level, Basilicata is the only Region that provides hospitalization activities only in public facilities (100.0%), while Lazio is the one that records the lowest share (48.0%). In the last decade there was an increase in the use of accredited private hospitalization facilities: the number of these cases compared to the total hospitalizations increased in the period by 0.7 p.p..

There was also a reduction of cases compared to the total number of hospitalizations for medical reasons, both in public (-4.0 p.p.) and in private facilities (-1.8 p.p.). On the other hand, there was an increase in hospitalizations for surgical reasons, especially in public facilities (+3.3 p.p.), as against private facilities (+2.5 p.p.).

(Ordinary) hospitalizations for medical reasons mainly include diagnoses of cardiovascular and respiratory diseases, and are mainly in public facilities: their use has remained substantially unchanged over the last decade.

Conversely, surgical cases (ordinary regime) mainly include diagnoses associated with the musculoskeletal system, and are mainly in private facilities: the share has continued to increase over the last decade.

By comparing the dynamics and trends of hospitalisations with those recorded at the demographic level, it emerges that, despite an increase in the over-60 population in the period 2012-2022, hospitalizations decreased in all age groups, with the exception of the over-85 population, where a 11.6% increase was recorded on average per year.

Alongside this reduction, an increase in average hospital stay has been recorded, which is probably due to the greater selection of cases, as well as to the increase in the average age at admission.

The indicators processed clearly show that, despite the progressive aging of the population, significant potential savings have been recorded at the hospital level: the value of production decreases

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"

(-4.0% on average per year), with savings being distributed fairly equally across all age groups under 85.

The reduction in the hospitalization rate, which has occurred in all age groups, mainly concerns hospitalizations for medical reasons and admissions of people under 60, equally in both public and private facilities. For surgical cases, in the same period, the contraction was more limited than for medical cases, and mainly affected the less elderly population. Such reduction affected public facilities, in particular; private facilities, on the other hand, recorded an increase, particularly in the population over 30.

In conclusion, it is reasonable to state that the new therapeutic treatments, together with the adoption of regulatory instruments aimed at improving the appropriateness of care, have promoted a reduction in the recourse to hospitalization, limiting it to the most complex cases (elderly population). Furthermore, the reduction in the number of hospitalizations for medical reasons suggests an improvement in the appropriateness of care in the non-hospital setting. Surgical activity remained almost unchanged in the period considered, but with a shift to private facilities, especially for surgeries regarding the musculoskeletal system.

CHAPTER 8
Residential care

Capurso S.[1], Gasbarri P.[2], Lo Giudice C.[3], Polistena B.[4], Spandonaro F.[5]

Residential and semi-residential social and health care is provided to different groups of users, such as chronically ill patients who are not self-sufficient (including people with dementia), terminally ill patients, people with mental distress, minors with psychiatric and neurodevelopmental disorders, people with pathological addictions and people with disabilities.

The Chapter analyses the data available for this care setting. It should be considered that - except for partial information on beds and assisted users provided by the Ministry of Health and ISTAT - data is severely lacking, and also difficult to compare due to insufficient definitions and homogeneous criteria for the classification of facilities and citizens' needs.

With all these caveats, it can be noted that the Italian provision of residential services is estimated to be less than a third of that of European countries with comparable economies: most countries have between 644 and 1,373 beds per 100,000 citizens over 65, while Italy has a provision close to 400 beds per 100,000 citizens over 65 (Eurostat, 2023).

Alignment with the European average provision would involve the creation of 200,000 new beds but, considering demographic forecasts that predict over 19 million over 65s within the next forty years, further 125,000 beds should be added.

As regards the characteristics of facilities, the Chapter reports the results of a survey promoted by the National Association of Territorial Facilities for Elderly People (ANASTE). For the second consecutive year, the survey was addressed to the member facilities, and collected data on the services and users of the member residential facilities in 2023. C.R.E.A. Sanità contributed to the survey by processing the replies.

Although data comes from a sample of facilities that is not representative in strictly statistical terms, the analysis appears significant considering the scarcity of information routinely available on this care segment.

74 facilities replied to the survey: 48% of the facilities invited to answer are located in 13 of the 19 Italian Regions where member facilities are present. The Regions with the highest number of responding facilities were Emilia Romagna with 15 facilities (20.3%), followed by Calabria and Lazio both with 10 facilities (13.5%). While analysing the replies of the responding facilities, we can note that there is good homogeneity among facilities, obviously to be interpreted in light of the fact that they are all facilities adhering to the same Association. On the other hand, significant differences persist in terms of staff, also linked to the geographical location of facilities.

While reiterating the caveats related to the non-representativeness of the sample, 32.4% of facilities declared to have a shortage of nursing staff, 13.5% of health and social care workers (OSS), and 25.7% of both profiles, while 28.4% declared not to have problems with staff shortages.

Similarly, we can see how diversified users are, both in terms of socio-economic characteristics of the people hosted in the facilities, and of comorbid-

[1] *National President of* ANASTE
[2] *President of* ANASTE Lazio
[3] C.R.E.A. Sanità
[4] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[5] *University of Rome* "Tor Vergata", C.R.E.A. Sanità

ity.

In particular, 23.7% of users in these facilities have a diagnosis of dementia; 10.2% of chronic ischemic heart disease; 8.9% of diabetes; 8.6% of cerebrovascular diseases (previous stroke / T.I.A.), followed by femoral fractures (6.4%), anaemia (5.3%), chronic obstructive pulmonary disease (5.2%), chronic renal failure (4.4%), neoplasms (3.6%) and respiratory tract infections (2.7% of the total) (Table 8.7.). On average, 1.2% of facility users are terminally ill.

On average, a user stays in the facility for approximately 6 months; 84% of patients required hospitalization in the period, and 23.5% died during their stay in hospital.

These considerations explain the reasons why the residential supply is extremely varied: a characteristic that, in turn, has generated a great disparity in classifications at the regional level.

Nevertheless, the differences in users are correlated to differentials in needs, which would deserve greater attention both in terms of defining facilities' requirements, and remuneration for care and assistance.

The sector, which has somehow remained on the sidelines of the investment made to strengthen territorial care and assistance, should urgently assess the need for care, and therefore any lack of supply, more objectively.

CHAPTER 9
Specialist and outpatient care

Spandonaro F.[1], Verneau F.[2]

The Chapter analyses the available evidence on the activity and expenditure related to outpatient specialist care.

Information is lacking, both in terms of timely updating of activity data and in terms of relationship between supply and population needs. Some essential information is also lacking to accurately assess the overall costs for this care segment.

In particular, the structure of supply has been analysed, trying to provide some information about the levels of fragmentation that characterize it, and about the trade-off between the need to ensure a response close to the needs felt by citizens and to pursue economies of scale to make the costs for providing services more efficient. The demand for services has then been analysed for the component that had access to the National Health Service (NHS), thus providing some food for thought on the trend of readjustment of activity volumes after the "collapse" due to the pandemic. Finally, the economic burdens associated with outpatient specialist care have been estimated, both on the NHS and non-NHS side, distinguishing between the activities of public and private facilities.

With regard to supply, in 2022 (the last year for which data is available), there were 9,085 outpatient facilities (including testing laboratories) at a national level, a number that decreased by 2.0% in the last decade (2012-2022).

59.1% of the facilities were private, and their incidence grew by 0.3 percentage points (p.p.) compared to 2012; 82.7% of the facilities were non-hospital ones (-0.5 p.p.).

In order to assess the fragmentation of the sector, while considering that a facility can provide services in different branches, the indicator of the average number of services per facility has been developed. As regards testing laboratories, at a national level the average number is equal to 308,332 tests per facility, a value which, although growing by 15.2% in the 2012-2022 decade, is at the minimum required for accreditation by national legislation.

In the North of Italy, the average number of services is almost three times higher than in the South.

As regards diagnostics, at a national level, an average of 18,619 services are provided, a value that decreased by 7.3% in the 2012/2022 decade; in the North, the average number of services is approximately double that in Sicila and Sardegna.

As regards clinical services (visits), an average of 28,554 services are provided at a national level, a value that decreased by 18.7% in the 2012-2022 decade; in the North-West the average number of services is 3.5 times higher than in Sicilia and Sardegna.

In the absence of a georeferencing of the facilities related to the concentration of population in the territory, which would be needed to objectively calculate the conditions of access to the facilities, we must confine ourselves to noting that, at a national level, 30.1 facilities are active per square kilometre, a value that slightly decreased (-2.0%) in the 2012-2022 decade. The North seems less "covered" with 21.3 outpatient facilities per square kilometre; they rise to 30.1 in the Centre and to 38.5 in the South of Italy. Each facility caters for an average of 6,509 cit-

[1] *University of Rome* "Tor Vergata", C.R.E.A. Sanità
[2] C.R.E.A. Sanità

izens, a value that slightly increased (+0.4%) in the 2012-2022 decade. In the North of Italy the average catchment area is equal to 10,686 citizens; they fall to 6,721 in the Centre and 4,183 in the South of Italy, following the evident South-North dimensional gradient.

As regards the activity carried out, in 2022 the number of laboratory tests was higher (+7.7%) than in 2019, before the decline due to the pandemic. The South of Italy, however, is an exception, as there is still a 1.8% unfilled gap.

The first half of 2023 saw a further 5.3% increase, and therefore the "recovery" compared to pre-pandemic levels now seems to have been achieved.

On the other hand, all other areas still remain below 2019 levels: diagnostics (-8.4%), visits (-13.8%), therapeutic (-5.8) and rehabilitation services (-13.6%). Only the service packages (PAC) have increased, although they have been developed only in some Regions (+2.7%).

The gap for diagnostics compared to 2019 is almost double in the South (-10.3%) as against the North of Italy (-6.9%); the Centre, however, also remains at -9.4%.

Similarly, for visits the gap is -12.6% in the North and -19.7 in the South: the gap has narrowed more in the Centre (-8.9%).

Although, as argued in the 2022 and 2023 C.R.E.A. Healthcare Reports, the reductions in services during the pandemic seemed to be positively correlated with the levels of services provided - so much so as to suggest that a process of selecting healthcare priorities capable of reducing inappropriate services had been triggered - the statistical relationship between the levels of per-capita provision of services in 2022 and in 2019 would seem to suggest a tendency to reset the volumes of provision of services to pre-pandemic levels. Indeed, if anything, regional variability seems to be increasing: for example, the range for tests is widening, with a ratio between the Regions that provide the highest and lowest level of services per-capita, which goes from 2.0 to 2.5 times. Similarly, for diagnostic services, a positive correlation is recorded and the variation between the extreme values is widening, going from 1.9 to 2.3 times.

This is also confirmed for visits, highlighting a "regression" towards the starting values.

An attempt has finally been made to assess the value of expenditure on outpatient specialist care.

Even with the needed caution due to the fact of having to make some assumptions in the absence of sure and certain data, the estimates developed lead to the conclusion that national expenditure on outpatient specialist care amounts to € 31.7 billion (thus resulting in the second largest expenditure item after that on hospital care), of which 64.6% is public (€ 20.5 billion), 4.0% is private, based on an agreement with the NHS (€ 1.3 billion), and the remaining 31.5% is not falling within the NHS (€ 10.0 billion).

When analysing the phenomenon by facility providing services, we can note that 55.0% of expenditure relates to the services provided by public facilities (€ 17.5 billion), net of those provided intramoenia (i.e. operating within the NHS); 13.5% to the services provided at private facilities operating under an agreement with the NHS (€ 4.3 billion), and the remaining 31.5% in both private and public facilities not operating under an agreement with the NHS (€ 10.0 billion), with a 8.0% incidence of intramoenia services.

The Chapter has ultimately highlighted that "pathological" levels of fragmentation persist in some Regions, which undermine any policy aimed at rationalizing the facilities providing services.

CHAPTER 10a
Pharmaceutical care: expenditure and governance

Polistena B.[1], Spandonaro F.[2]

The Chapter analyses the levels, dynamics and trends of pharmaceutical expenditure, as well as the evolution of its components, with the ultimate aim of drawing useful indications to improve the governance of the sector.

In 2023 national pharmaceutical expenditure reached almost € 36 billion, growing by a 4.8% average per year in the five-year period 2018-2023. Public expenditure accounted for approximately 70% of it and increased compared to 2018 by a 4.5% average per year. The share paid by citizens (including co-payments, "Class A" medicines purchased privately and "Class C" medicines) was equal to € 10.6 billion, increasing by a 5.5% average per year.

Pharmaceutical expenditure included in the Essential Levels of Care (LEA) amounts to € 26.9 billion (75.7% of total pharmaceutical expenditure). Due to citizens' co-payments, and also to the households' direct purchase of "Class A" drugs reimbursed by the NHS, the actual cost for the State is reduced to € 21.3 billion (equal to 60.2% of total expenditure).

It should be considered that actual public expenditure is further reduced by 7.3% due to the payback effect.

Pharmaceutical expenditure trends are all increasing: over the last five years, public expenditure has increased by a 4.5% average per year (a 3.6% average per year over the last decade), while private expenditure has increased by a 5.5% average per year in the five-year period and by 3.7% in the decade.

Public pharmaceutical expenditure continues to grow more than the NHS funding, thus resulting in an increase in its impact on the NHS budget, which is not even offset by the continuous payback increase.

At the same time, private pharmaceutical expenditure is also growing by 1.8 p.p. per year more than GDP, and even more than the public one, thus increasingly shifting the pharmaceutical burden onto households' budgets.

It should be noted that both the private and public components of the pharmaceutical expenditure have grown faster over the last five-year period than in the previous one. The data for the public sector is driven by hospital expenditure, as the net expenditure falling within the NHS regime (the so-called spesa convenzionata netta) decreased both in the decade and in the five-year period and the direct distribution and the distribution of Class A drugs through pharmacies grew more in the first five-year period.

As regards private expenditure, it is interesting to note that the use at regional level is uneven and not always correlated with income levels, as might also be expected. For example, although it tends to be higher in the North of Italy, in the Autonomous Provinces of Trento and Bolzano it is lower than in the South of Italy. In general terms, there is no correlation between GDP and private health expenditure per-capita, not even considering only private expenditure on Class A drugs or on Class C drugs alone. On the other hand, there is a positive correlation between GDP per-capita and cost-sharing and also with expenditure on self-medication. It can therefore be inferred that the revenue from co-payments is actually linked to financial means. Similarly, it can be inferred that the propensity to spend on self-medication is propor-

[1] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"
[2] *University of Rome* "Tor Vergata", C.R.E.A. Sanità

tional to the resources available to households.

Recalling what has been argued about growth rates, it appears evident that the current regulatory framework is no longer able to keep expenditure under control, thus requiring a new governance of the sector.

Governance has so far remained 'static', confining itself to tweaking/revising the ceilings. On the other hand, for example, the rules for distributing the financing have not been updated. It should be considered that, in the case of pharmaceuticals, these rules envisage that 11.71% of the Standard Requirement for the LEA of district care should be allocated to the Regions – and we can assume that a further 3.5% should be added for hospital consumption (a percentage assumed to be equal to the last assessment dating back to Law No. 135/2012) - leading to a total that would still be in line with the current ceiling. As we have seen, however, hospital expenditure is increasing fast and, therefore, in the face of probable further growth, pharmaceuticals risk eroding both the share of (non-pharmaceutical) resources allocated to hospital care, and the share allocated to territorial care, which is also the one considered a priority for development prospects.

As anticipated, the updating of ceilings is "chasing" after the growth of expenditure. The 2024 Budget Law has redefined them once again, to the tune of 8.5% for direct purchases (including medical gases) and 6.8% for pharmaceutical expenditure within the NHS regime. As far as we known, no further changes to the pharmaceutical expenditure ceilings are planned for 2025, while the Innovative Medicines Fund is expected to be reduced to € 900 million.

Estimating what could be the outcome of the re-definition of the ceilings envisaged by the aforementioned 2024 Budget Law - considering a 4% increase in the National Health Fund (FSN) for 2024 (useful for determining the ceiling) and a growth in expenditure under the NHS regime (the so-called spesa convenzionata) equal to that recorded between 2022 and 2023 - the latter in 2024 would continue to record a surplus equal to € 870 million. If, on the other hand, the trend recorded in the first four months of 2024 were to be confirmed, it would come close to total utilisation of the ceiling; for 2024, therefore, the ceiling would still appear to be "capacious".

On the other hand, with regard to public facilities' expenditure for direct purchases, if we were to consider the same increase recorded between 2022 and 2023, the overrun would reach € 4.1 billion, with the risk that the situation could be even worse, with an overrun of € 4.9 billion, if the trend recorded in the first four months of 2024 were confirmed.

In conclusion, the new governance of the sector cannot fail to consider - in an overall and coordinated manner - the issue of silos (and hence the valorisation of any savings from pharmaceuticals on the other care settings), but also the allocation criteria, the rethinking of ceilings, and the checks on prescription appropriateness, on adherence to therapies, on innovation incentives, and on citizens' cost-sharing policies.

CHAPTER 10b
Expenditure on medical devices

Caforio G.[1], d'Angela D.[2]

The sector of Medical Devices (MDs) encompasses a considerable variety of goods, ranging from those for single use (prostheses, etc.), to those for multi-year use (equipment, software, digital medicine devices, etc.), representing a significant cost for the National Health Service, monitored with dedicated information flows.

Based on an analysis of the available information sources, the Chapter attempts to reconstruct the costs actually borne by the National Health Service (NHS) for MDs. It also analyses the overruns of the expenditure ceiling envisaged by regulations and its dynamics in relation to the variation in the composition of supply (public and private). Indicators are also suggested that could be adopted for the benchmarking of the expenditure on MDs in public facilities.

In 2023 national expenditure on MDs - considering only the item officially used for monitoring (CE-BA0210) - was equal to € 7.8 billion (+3.4% over the previous year, with an average per-capita value of € 132.8 (+3.36% over the previous year).

At the regional level, we went from a minimum value of € 98.4, in the Lazio Region, to a maximum value of € 190.1 in Friuli Venezia Giulia (as against a median value of € 147.6).

The data processed shows a significant regional variability, which is also due to the failure of recording the charges relating to the MDs purchased by private facilities for activities supplied on behalf of the NHS. The highest expenditure value is, in fact, recorded in the Regions in which the share of public admissions on total admissions is greater: e.g. in Friuli Venezia Giulia, where, in 2022 (latest data available), ordinary admissions for surgery purposes in public facilities accounted for 84.4% of the total admissions, followed by Umbria (89.1%) and Marche (83.3%). In the Regions with a greater share of services supplied by accredited private facilities, such as Lazio (42% ordinary admissions for surgery in public facilities), Campania (53.7%), Lombardia (54.5%) and Molise (54.9%), the lowest expenditure values are recorded.

In 2023 the expenditure on MDs - as determined above – accounted for 6.14% of the National Health Fund (NHF) (+0.07 percentage points over the previous year), exceeding the planned expenditure ceiling (4.4%) by 1.7 p.p..

However, the flows adopted to date for checking compliance with the expenditure ceiling, have several problematic aspects:

1. *the public-private supply mix at regional level is ignored, and this distorts the results in favour of the Regions that entrust to the private sector a greater number of procedures requiring the use of medical devices (a phenomenon which has also been growing in recent years);*
2. *the purchases of medical devices for hire and/or leasing are not taken into account;*
3. *similarly, no account is taken of expenditure on prosthetic assistance services, both with direct supply and on account;*
4. *finally, expenditure on depreciation of equipment is not accounted for.*

By adding the cost borne by public facilities to the items of the CE relating to prosthetic assistance,

[1] C.R.E.A. Sanità
[2] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"

to the rental of healthcare assets and the estimated depreciation of medical devices for repeated use (equipment, etc.), the 2023 expenditure should be supplemented by € 2.7 billion, reaching € 10.5 billion (€ 177.4 per-capita), with a 3.9% increase over the previous year.

At the regional level, we go from a minimum expenditure of € 144.4 per-capita in the Lazio Region to a maximum of € 229.9 in Friuli Venezia Giulia (median value equal to € 185.8).

Moreover, by adding the cost borne by public facilities to the one which can be estimated to be borne by private ones, the average cost per-capita for MDs would range between € 235 and 264 (depending on which estimate for the accredited private facilities is adopted). It would anyway be lower than the European average by 13.2-22.8% (€ 304 according to Medtech Europe 2024).

Considering the shortcomings in the flows reported above, three different monitoring indicators are suggested for the benchmarking of public expenditure:

1. *expenditure on consumable MDs (net of in vitro diagnostics) per admission in public facilities*
2. *expenditure on in vitro diagnostic MDs for laboratory service performed in public facilities*
3. *standardised per-capita expenditure on prosthetic assistance.*

The median expenditure for ordinary hospitalisation relating to MDs, which has been growing in the medium term, is the highest in University hospitals, the so-called Aziende Ospedaliere Universitarie - AOU (€ 1,709.8), followed by the so-called Aziende Ospedaliere (€ 1,445.5), the Local Health Units (ASLs) (€ 1,419.6) and the Scientific Institute for Research, Hospitalization and Healthcare (IRCCSs) (€ 1,251.6). As was to be expected, the level of average expenditure varies according to the type of facility: it is the highest in those that treat the most acute and severe diseases (AOUs).

Ultimately, there is an urgent need to define a governance for MDs, taking their heterogeneity into account (large equipment, single-use MDs, repeat-use MDs, software, telemedicine tools, etc.), as well as the type of acquisition and facility.

CHAPTER 11
Investments if Italian NRRP towards Territorial Health Care Reform: Findings 2023

Altamura G.[1], Vena V.[1], Palozzi G.[2], Nardini A.[1]

Evolutive trends and scientific progress in recent decades have led to a radical transformation in life expectancy and quality of life for Western Countries populations. Nevertheless, the aging process, along with new syndromes morbidity, has intensified demand for equitable and accessible healthcare. This circumstance asks worldwide Health Systems to develop new operational strategies capable of balancing cost containment and high-quality care delivery.

Particularly, economic sustainability of the Italian Healthcare Service, as fully open-access system, has required to shift healthcare approaches from supplying singular services in response of patients' contingent necessities to an integrated management of individuals' diagnostic-therapeutic pathways towards prediction of health status evolution. This leads Health Policies to redesigning healthcare delivery processes within local territories and patients' homes, with the goal to anticipate healthcare needs towards a cost-effective treatment, in the lens of better health outcomes and financial sustainability.

As introduced by the Decree of Ministry of Health No. 77/2022, the Reform of territorial health care follows this new policy direction, also thanks to financial resources made available by the Italian National Recovery and Resilience Plan (NRRP). The Reform reorganizes healthcare pathways via local health facilities designed to serve as a "filter" between patients' daily cares and service provided by General Hospitals.

Based on the classification of patient's health needs, the new care model provides for the implementation of new health facilities aimed at addressing progressively growing levels of patient's healthcare requirements within a geographical health district.

Furthermore, with the aim of ensuring effective individual patient management, the model provides rules for patients transition across the different care settings and prescribes strategies of healthcare based on digital health and home care solutions.

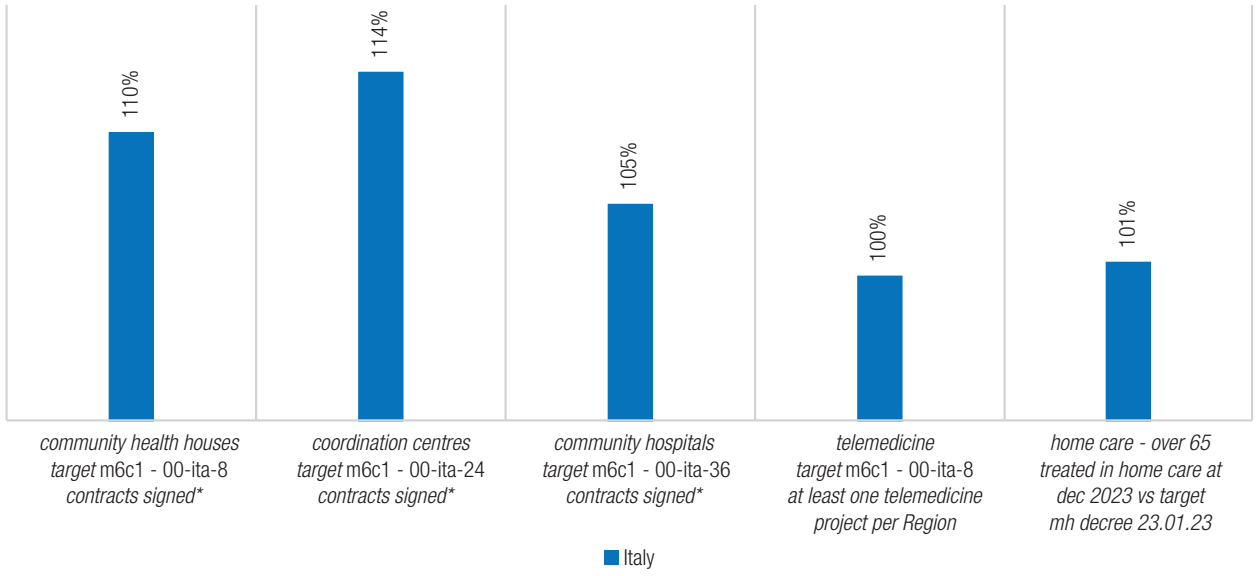
Given the above, this manuscript wants to depict an overview of financial and physical progress of the investments funded by the Italian NRRP (Mission No. 6 – Health) that can be considered as the cornerstones of the implementation the aforementioned territorial health care Reform. Particularly, in 2023, the work highlights the compliance of working-process status of investments following the implementation timeline schedules, according with the commitments undertaken with the European Commission. Thus, the focus of the study are interventions on: Healthcare Buildings (Community Health Houses, Coordination Centres, Community Hospitals), Telemedicine, and Home Care.

Data were gathered directly from the Institutions implementing the investments (Italian Regions and Autonomous Provinces) by the Office of the Mission Unit of the Ministry of Health in charge for monitoring activities, which monthly collects information about all underway interventions related to Mission No. 6 – Health of the Italian NRRP.

Findings in December 2023 on physical progress of investments indicate that Italy achieves all European and National targets set for that date. Specifically.

[1] Unità di Missione per l'attuazione degli interventi del PNRR, Ministero della Salute
[2] Struttura Tecnica della Cabina di regia per la valorizzazione e dismissione del patrimonio immobiliare pubblico, Ministero dell'Economia e delle Finanze

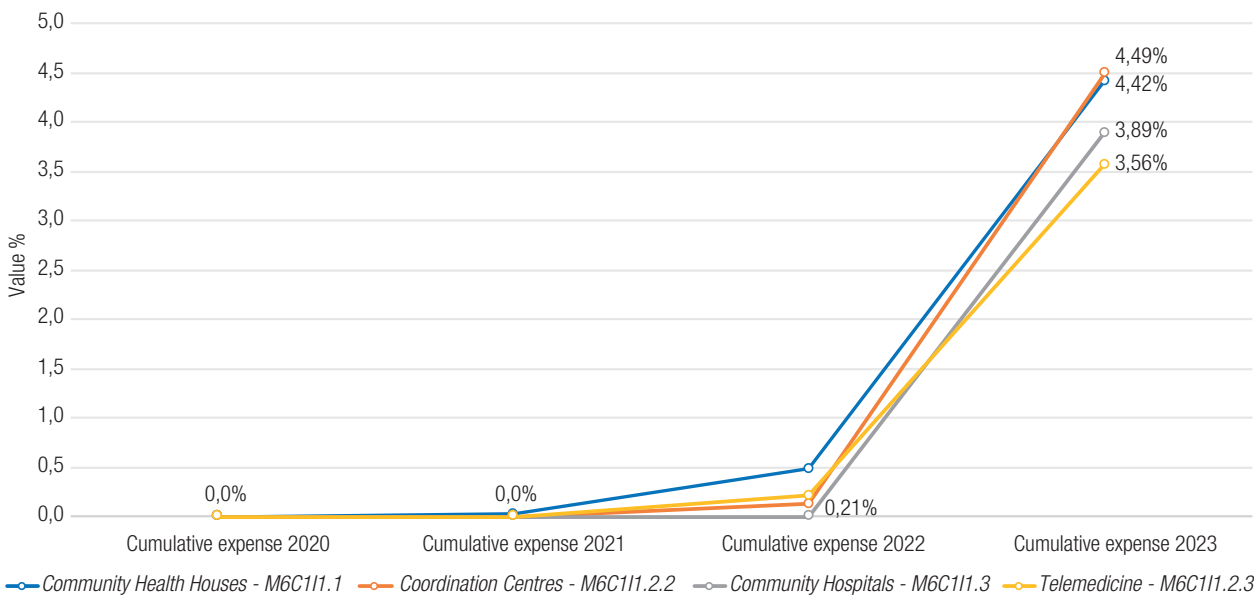
Targets achievement (%), 2023



** Measurement from Italian NRRP Mission Unit - Ministry of Health / EU target Q4 2023*

Source: Own elaboration based on data from Mission Unit for the implementation of the Italian NRRP - Ministry of Health, 2024

Healthcare Buildings and Telemedicine – Expenditure (%), 2023.



**Aggregate payments as of December 2023 / total NRRP funding (December 2023)*

Source: Own elaboration based on NRRP Mission Unit data – Ministry of Health, 2024

- *concerning investments on Healthcare Buildings, all supply contracts required to ensure the number of infrastructures agreed upon European Commission have been signed;*
- *concerning the investment in Telemedicine, all scheduled Operational Plans and Organizational Models have been adopted;*
- *concerning the investment in Home Care, the*

total number of over 65 patients treated in home care, as established by the Ministerial Decree of January 23, 2023, has been fully achieved.

Findings on financial monitoring on December 2023 indicate a low level of general expenditure (aggregate payments/total Italian NRRP funding), for investments in Health Buildings and Telemedicine (Figure 2).

Particularly:

- *aggregate expenditure for investments in Health Buildings is consistent with planning, administrative, and contractual phases carried out up to 2023;*
- *aggregate expenditure for Telemedicine investment mainly reflects resources transferred to Agenas (National Agency for Regional Healthcare Services) for the development of the National Telemedicine Platform, which was tested and validated in November 2023.*

Regarding the investment in Home Care, it is observed that the 79% of the 2023 financial resources were eligible to be transferred to the Regions/Autonomous Province, according to the Decree of Ministry of Health of January 23, 2023. This is due to few Regions lack to achieve their own target of treating in home care a minimum number of over-65 patients (notwithstanding the national achievement exceed target assigned - 101%).

From the monitoring activities conducted on investments involved into the territorial health care Reform, in December 2023, findings show that work-progress of interventions is aligned with the scheduled timelines and no issues seem to jeopardize achievement of targets fixed by the Italian NRRP.

CHAPTER 12
Home care services: the evolution of beneficiaries and charges

Ploner ME.[1]

The Chapter focuses on home care services, which are the "natural" connection between the health and the social sectors, starting from the assumption that home care is responsible for managing chronic conditions accompanied by disabilities and that it is "necessary" whenever it is possible to provide rehabilitation or maintenance support directly at the patient's home.

The analysis has focused on the development of Integrated Home Care (ADI), with costs borne by the National Health Service (NHS) – which provides for coordination between health and social activities, managed by a Multidimensional Evaluation Unit of the Local Health Unit (ASL) – and on the development of Home Care Services (SAD) provided by Municipalities. The latter can take different forms, such as social assistance, integration with health services, vouchers or care allowances.

According to estimates, in 2023 approximately 1.2 million people used the ADI service. Between 2018 and 2023, the cases treated increased steadily, although with notable regional differences: the Autonomous Provinces of Bolzano recorded an annual growth of over 64.0%, while Sardegna saw a 4.6% reduction on average per year.

ADI is a service mainly oriented towards the elderly people, despite being initially conceived to support the entire disabled population: in fact, 84.6% of beneficiaries are aged over 65 and, comparing the cases treated to the total disabled population, it is estimated that in 2023 approximately 9.3 disabled people out of 100 received Integrated Home Care.

If we consider the population over 65, in 2023, 7.5 out of 100 elderly people were cared for at home, with a 1.0% increase compared to 2018.

Considering the care intensity (measured as the average annual number of hours of care for each patient), it is possible to highlight four groups of Regions that can be classified on the basis of the intervention model followed: 1) caring for more elderly people with less intensity (Autonomous Province of Bolzano, Veneto, Friuli Venezia Giulia, Emilia Romagna, Toscana and Molise); 2) caring for more elderly people with more intensity (Basilicata); 3) caring for fewer elderly people with more intensity (Valle d'Aosta, Liguria, Lazio, Abruzzo, Campania, Puglia, Calabria, Sicilia and Sardegna); 4) caring for fewer elderly people with less intensity (Piemonte, Lombardia, Umbria and Marche).

With specific reference to SAD, it is estimated that in 2022 (the year for which the latest data is available) approximately 375,000 individuals benefited from a home care service, with a 12.8% increase compared to 2017. With regard to the over-65s, it is estimated that approximately 1.0% used the home care social-assistance service (in the five-year period 2017-2022); 0.6% used the home care service integrated with health services (the same as in 2017) and 0.4% received monetary transfers (vouchers, care allowances, social health vouchers).

In statistics, home care integrated with municipal health services should coincide with ADI - by simply changing the observation point - i.e. we should expect that those who receive ADI also receive social services (hygiene and personal care, assistance when getting up, meal preparation, etc.) integrated with municipal health services. With specific reference to the 2022 data, however, facts seem to in-

[1] C.R.E.A. Sanità

dicate that home care that sees the integration of health professionals is rarely supported by social interventions. According to this interpretation, only 8.8% of those who receive ADI also receive Integrated Home Care ensured by the Municipalities.

Ultimately, while it can be recognized that ADI is a growing service in terms of patients assisted, it is equally true that this seems to have been to the detriment of care intensity (the average hours of care per elderly patient fell from 18 in 2018 to just over 15 in 2023). Furthermore, the integration of health and social services remains the most complex objective to achieve. The competence for home care services continues to be separated and divided between Municipalities and Regions, and there are still a few cases that are managed jointly. Above all, there are no uniform conditions of supply across the whole national territory. There are still few Regions that have established well-defined and shared principles and criteria for the integration of tasks and responsibilities between the social and health sectors.

CHAPTER 13a
The reform of care for elderly people

Gori C.[1]

The Council of Ministers definitively adopted the Implementing Decree (29/2024) of the Enabling Act (33/2023) reforming care for the dependent and non-self-sufficient elderly people. The process, which began with the inclusion of the reform in the National Recovery and Resilience Plan (NRRP) in spring 2021, has thus come to an end. The stated aim was the overall reorganisation of the sector so that it could better respond to the growing number and increasingly problematic conditions of the dependent and non-self-sufficient people, thus bringing Italy into line with the European reforms already implemented to this end.

The Enabling Act, in fact, pursued that aim through a comprehensive and worthy project of change. The recent Implementing Decree, instead, has followed the guidelines of the Enabling Act in a partial manner and has sharply scaled down the change efforts. On the other hand, the great criticism levelled by the Parliamentary Committees, the Regions, the Pact for a New Welfare on Non-Self-Sufficiency, and others, at the initial version of the Decree did not push the government to make significant changes in the final version. This is exactly the paradox of the reform: finally adopted on a formal level, and postponed to better times on a substantial level.

Creation of an Integrated System

With a view to better understanding the situation, let us focus on the three aims that the Enabling Act attributed to the reform: the creation of a joint system, the definition of new intervention models, and the expansion of supply. The first aim is intended to overcome the fragmentation of public measures, characterized by uncoordinated health services, social services and monetary transfers, with a babel of different rules and procedures to be followed, which disorient elderly people and families and limit the possibility of providing appropriate interventions.

For this reason, Law No. 33/2023 introduced the National System for the Non-Self-Sufficient Elderly People (SNAA).

The SNAA envisages - at the central, regional, and local levels - the integrated planning of all public interventions for non-self-sufficiency, pertaining to health, social, and INPS monetary benefits. In practice, the public actors involved jointly plan how to use all the resources for non-self-sufficiency, keeping their respective competences unchanged.

In the Implementing Decree, instead, integrated planning no longer concerns the whole set of measures, but only social services and interventions. The SNAA is thus formally maintained in principle, but cancelled in substance. Collaboration between the different institutional players is also removed from the aims of the reform.

Assessments of the elderly people's dependent and non-self-sufficient condition

Law No. 33/2023 revised the many assessments of the elderly people's dependent and non-self-sufficient condition that determine the interventions to be received. Today there are too many of them (five to six) and they are not interconnected, thus duplicating the operators' efforts and making the pathway of the people involved very complicated.

With the reform, assessments are reduced to only two: one falls within the State's competence and the

[1] *Full Professor of Political Science, University of Trento; Coordinator, Pact for a New Welfare on Non-Self-Sufficiency*

other within the Regions' competence. Moreover, the two assessments envisaged by the new system are closely linked, so as to ensure continuity of pathway for elderly people and families. The Decree postpones the design of its concrete implementation to subsequent acts, but the streamlining of procedures and steps is well established in all its key aspects.

New intervention models

The Enabling Act provides for new intervention models. The existing ones, in fact, were often designed many years ago according to logics that are now outdated and overcome by reality, as well as inadequate for the future, without proper consideration of the specific features of the non-self-sufficiency condition. Let us see what has changed for the most widespread measures and services.

With specific reference to home care services, in the passage from the Enabling Act to the Implementing Decree, the planned reform of home care has been cancelled. A specific model of home services for non-self-sufficient people, which is currently lacking in Italy, was to be introduced. Considering the necessary factors, only the coordination between social and health interventions remains, while decisive aspects such as the appropriate duration of care provided and the mix of professionals to be involved are absent. Above all, what is lacking is a plan that can answer the following question: "what home interventions do the dependent elderly people need?"

As to residential services, the Enabling Act contains some guidelines for an appropriate staffing of facilities, the guarantee of their skills and the quality of living environments, i.e. the main aspects to be addressed in a reforming perspective. The situation, however, is interlocutory. The Implementing Decree, in fact, does not contain substantial guidelines and refers to a later Decree.

Attendance and support allowance

Law No. 33/2023 had envisaged transforming the attendance and support allowance into a new measure called universal benefit, through an intervention based on the guidelines shared by the technical debate: i) maintaining access only on the basis of the need for assistance (universalism); ii) grading the amount according to that need; iii) possibility of using the allowance to benefit from regular and quality care services to people (caregivers or non-profit organisations), receiving a higher amount in this case. In the passage to the Decree, however, the revision of the allowance also disappeared and a completely different temporary measure was introduced to replace it, although also called universal benefit.

Expansion of the supply of services

The last aim of the reform is to extend the supply of services to people, in particular, which is scarce in Italy. To do this, it is necessary to increase dedicated public funding. The Decree does not provide for new structural funds, but it has long been known that no additional resources would be available at this stage.

In any case, the decisive factor lies in the ability to redesign welfare. In other words, it is a matter of starting from the design of responses: only if this is solid, does it make sense to discuss funding. Therein lies the problem. For none of the three main measures (home care, residential care, and allowance) is a project for change planned today. It makes no sense, therefore, to complain about the absence of structural funds, considering that there is no development pathway for the sector to which they could possibly be allocated.

Consequences for elderly people and families

In the end, one question remains open: what will change for elderly people and families in concrete terms? The only structural change introduced is the revision of non-self-sufficiency assessments, to be made operational in 2025, which should make life easier for those concerned, by streamlining and simplifying steps and procedures. This is a major change, but it is the only one. The rest is postponed until when - after this substantial postponement - we will actually provide Italy with a reform of care for the dependent and non-self-sufficient people.

CHAPTER 13b
Cash benefits: the evolution of beneficiaries and charges

Ploner ME.[1]

The Chapter analyses the development trends of economic cash benefits related to non-self-sufficiency needs.

Although in the National Health Service (NHS) cash benefits play a marginal and limited role, in the social sector they are prominent and take the form of benefits or allowances that often have no constraints on their use or strict requirements for access. Moreover, since these benefits do not involve the direct provision of services, they are not linked to forms of accreditation of facilities.

Most of these benefits are managed by the National Social Security Institute (INPS): those analysed in the Chapter are attendance allowances, civil invalidity pensions, disability pensions and paid leave under Law No. 104/1992.

Over the last decade (2014-2024), both recipients of attendance allowances and civil invalidity pensions have steadily increased (+1.4% on average per year for the former and +1.7% on average per year for the latter); these increases are mainly due to the progressive ageing of population.

On the other hand, the beneficiaries of invalidity pensions (invalidity allowances, incapacity pensions and pre-1984 invalidity pensions) have decreased by a 0.7% average per year over the same period.

There are, however, marked differences in the granting of this economic benefit: in the Northern Regions 12.2% of the over-65s received an attendance allowance, 17.6% in the Central Regions and 22.0% in the Southern Regions. The incidence of the beneficiaries of civil invalidity pensions on the population aged between 18 and 65 is 2.8% at a national level and considerable differences are evident between the geographical areas: the average incidence of beneficiaries is 1.6% in the Northern Regions, 2.6% in the Central Regions and 4.4% in the Southern Regions. The incidence of the beneficiaries of disability pensions on the population aged between 8 and 65 is 0.9% at national level, but 0.7% in the Northern Regions, 0.9% in the Central Regions and 1.2% in the Southern Regions.

In 2024, 60.3% of the recipients of attendance allowances are women: this phenomenon is linked - at least in part - to the higher proportion of elderly women, who account for 56.1% of the over-65 population. Also in the case of civil invalidity pensions, the main beneficiaries are women (53.0%). The recipients of disability pensions, instead, are predominantly men (65.7%): this male prevalence reflects the link between this economic benefit and participation in the labour market, which is traditionally historically higher for men.

In the range of benefits for non-self-sufficient people provided for by Italian legislation, there is also Law No. 104/1992, which grants people with disabilities and their family members the opportunity to tale periods of paid leave from work, in addition to the normal leaves provided, for example, for maternity. In 2022, 5.6 million leaves were taken by public sector employees; those who made the most use of leaves were women. In 2022, female employees in the public sector benefited from 59.2% of the total leaves. In the private sector, instead, there were 549,497 beneficiaries of leaves. Over 485,277 (88.3%) took advantage of leaves for a family member (only 64,220 beneficiaries benefited from it personally): in any case, they were mostly women.

[1] C.R.E.A. Sanità

In 2023, public spending on the benefits analysed was estimated to be equal to € 25.4 billion, equivalent to 19.7% of public health spending. The largest portion, 59.2%, was related to attendance allowances; followed by civil invalidity pensions with 17.4% and IVS disability pensions (disability, old-age and survivors' pensions) with 13.7%, considering only beneficiaries under 65 years of age. Lastly, the remaining 9.7% was related to costs associated with leaves pursuant to Law No. 104/1992, which still largely covered needs related to sickness and disability.

Finally, although there is no "accounting" for informal aid, we can assume that in 2023, at least € 4.8 billion out of € 15.1 billion paid in attendance allowances, were allocated to informal aid.

CHAPTER 14
The Healthcare Industry: evolution and prospects for Italy's growth

d'Angela C.[1], d'Angela D.[2]

The Life Sciences industry includes various segments: in addition to the pharmaceutical and medical devices (MD) sectors, which are the main ones in terms of size, products from the ICT sector are constantly growing, as well as those related to logistics solutions.

These are sectors that play a leading role (directly and indirectly, through their linked industries) in the national economy in terms of their contribution to employment, value added, investment and exports. The industrial sector's contribution to the country's economic growth is significant, also in view of supporting the sustainability of Italy's National Health Service (NHS).

This Chapter addresses the topic by focusing on the quantitative analysis of the pharmaceutical and MD sectors.

The linked industries of these sectors exceed 10% of the national Gross Domestic Product (GDP) in Italy, second only to the Food and Construction sectors (Confindustria, Position paper "La prosperità dell'Italia passa dal settore salute" (Italy's prosperity is based on the health sector), 2020.

Italy is one of the main production countries in the world, with a 10.7% European share in the pharmaceutical sector and a 12.3% share in the MD sector.

At a national level, the production value of the two sectors accounts for 3.8% of GDP (2.7% for pharmaceuticals and 1.1% for MDs), with a 0.4% growth over the last year.

Over the last decade, the production growth rate of both sectors has been approximately three times higher than that of GDP, thus confirming the importance of the life sciences sector also for Italy's economic development.

In terms of employed people, Italy is the third country in Europe for workers in the pharmaceutical industry (70,000 people employed in 2023), recording a 12.4% increase over the last ten years

In confirmation of this, Italy's pharmaceutical sector generates a value added per employee (€ 170.0 per 1,000 employees), which is double the average of the manufacturing sector, and almost triple the average of the economic and financial sector, and has grown by 7.0% over the last year, thus increasing the (positive) gap with other sectors.

Similar considerations can be made for the MD sector, which ranks second in terms of employees in Europe, with 117,607 people, although decreasing over the last year.

The value added per employee is equal to € 167.5 per 1,000 employees.

Overall, the market of the two sectors is significant: in 2023 the pharmaceutical one reached € 52 billion, while the MD sector stood at € 18.3 billion. This adds to the value of the linked industries, which - according to estimates made for the pharmaceutical sector - triples its value and more than triples the number of employees.

As regards foreign trade, Italy's trade balance is positive for the pharmaceutical sector (+ € 10.7 billion) and negative for the MD sector (- € 2.5 billion). In the pharmaceutical sector, Italy has recovered two positions in the European ranking over the last year, thus becoming the seventh country for (positive) trade balance. In the MD sector, the negative

[1] C.R.E.A. Sanità
[2] C.R.E.A. Sanità, *University of Rome* "Tor Vergata"

balance has worsened further.

Italy stands out particularly in some segments, such as vaccines, which, over the last decade, has significantly contributed to the positive trade balance of drugs, due to the huge value of exports, and of in vitro diagnostics, for which it holds 10% of the European market.

The available evidence on the evolution of the sector and its impact on Italy's growth is clearly indicative of its strategic value for the growth of the country and, therefore, of the need to closely combine welfare and industrial policies, aiming at maximizing the combined impact of the aforementioned policies in terms of overall social benefit.

CHAPTER 15
Healthcare for mental health in Italy

d'Angela C.[1]

According to data from the latest World Mental Health Report (WHO), almost one billion people in the world (14% of whom are adolescents) have had a mental health disorder: one person in 100 has died by suicide and in 58% of cases suicide has occurred before the age of 50. Mental disorders are the leading cause of disability, and people with severe mental disorders die on average 10 to 20 years earlier than the general population, often from physical illnesses that can be prevented. In the first year of the pandemic, depression and anxiety increased by an average of 28% (in Italy by 26%). The WHO states that in 2030 depression and other mental health problems will be the most widespread pathologies in the world.

This Chapter aims to assess the "state" of care of individuals with mental health problems in Italy, and its dynamics and trends in the medium term (2015-2022); indicators representing the organisational models of care have been used, as developed by using Ministerial information flows.

The number of patients treated in mental health services (territorial, residential and semi-residential facilities) is 154.2 per 100,000 inhabitants, a number that has decreased over the last five years in all geographical areas, with the exception of the North-East, with a maximum decrease in the South of Italy.

The decrease affected all three care settings (outpatient/home, residential and semi-residential ones), concentrated in the three-year period 2020-2022, probably due to the limited access to facilities following the Covid-19 pandemic.

The patients treated are mainly in the 45-64 age group, but the last five years have seen an increase in the number of young people treated (18-34 years), who now account for about 20% of patients in treatment.

Depression and schizophrenia are the most frequent disorders diagnosed among the patients treated in territorial outpatient services, although there has been a slight reduction, as against an increase in cases of personality and behavioural disorders.

40,285 staff units worked in mental health services in 2022, of whom 74.7% (30,101) worked in the public territorial services of Local Health Units (51.0 per 100,000 inhabitants). As to geographical distribution, there are significant differences in staffing levels: in the North-East there are 65.3 operators per 100,000 inhabitants, while in the South 38.9.

During the 2017-2022 period, there was a 1.5% yearly average increase in the number of staff in territorial outpatient services, but this only affected the Centre and the North-East of Italy.

Relating the patients treated in the services and the staff working there, a low correlation is recorded, indicative of the failure to implement homogeneous programming standards.

Relating the staff of territorial public services to the patients treated, there are 2.5 units for every 100 users, with a significant gap between the North-East (3.2) and the South (1.9). Over the last five years, there has been a growth in the ratio, which, however, has been concentrated in the North-East and the Centre; the North-West and the South have, in fact, recorded a reduction in the indicator.

The recourse to hospitalisation (40.1 admissions per 10,000) has decreased by a 6.8% yearly average over the last five years, and there has been an

[1] C.R.E.A. Sanità

increase in admissions to psychiatric wards (about 42.0% of patients admitted with mental health-related diagnoses are discharged from such wards). At the same time, there was a reduction in emergency room admissions (-1.0% average per year over the period 2017-2022) and in Involuntary/ Compulsory Health Treatment (-7.8%).

The share of patients who receive a visit within 14 or 30 days of discharge is close to 35%, but it decreased over the period considered, albeit with significant variability between Regions.

In economic terms, according to the Health Ministry's LA (Levels of Care) data flow, the average annual cost per mental health patient is € 4,263.2, and decreased in the medium term (2017-2022) by a 2.8% average per year.

The reduction in the number of acute episodes to be managed appears indicative of the fact that the new treatments available (long acting, etc.) - although associated with an increase in the average cost per user, by increasing adherence to treatment - also allow to generate savings in terms of hospitalisation.

In short, there appears to be a reduction in the number of services taking charge of patients, in spite of the increase in psychiatric disorders recorded at the epidemiological level. In this scenario, it is desirable to bring staffing levels into line with the standards set forth in the recent Ministerial Decree No. 77/2022, with a view to bridging the gaps that currently exist between the various geographical areas.

Moreover, in view of ensuring continuity in taking care of patients, particularly those who are hospitalised, it is also desirable to implement Diagnostic and Therapeutic Care Pathways (PDTA), at least at a regional or local level (Local Health Unit), aimed at ensuring equity in taking care of all patients suffering from these pathologies, by possibly giving priority to the most frequent ones, such as schizophrenic disorder and depression.

In terms of planning, it should be borne in mind that aligning supply and increasing the services provided to patients will presumably lead to an increase in overall expenditure, which currently amounts to 2.8% of the National Health Requirement.