PEDiatric health mobility in the campAnia region: an interdIsCIplInary study

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Through an interdisciplinary approach, the following pages will analyse first those structural factors crucially influencing the decision to contact a health service outside one’s residence region in order to solve one’s health conditions. We will see that many of these choices are attributable to differences – both real and perceived – in the supply of regional health services, partly as a result of some important reforms that occurred in recent decades in the National Health System. We will next discuss the phenomenon more in detail, referring particularly to the pediatric health mobility from health services within the Campania Region to those of other regions, reconstructed through both the analysis of hospital discharge records (in Italian SDO) and the testimonies of pediatricians in some regional provinces.

Keywords: Passive mobility, Health System, Pediatrician, Campania Region, Focus Group

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1. Fiscal federalism and regional health system

By the expression “passive mobility”, we generally refer to «the percentage of people who, in a given period and with respect to the total [of the] residing population, decide to address their demand for healthcare outside the services their local health unit (in Italian ASL) has devised for coverage of their province» (Guarino 2005, 39)

The concept is also closely linked to economic matters, «or related to the financial situation of the local health unity, since mobility is a phenomenon to be considered differently depending on it being a source of expense or gain» (ibid.). That is why we usually distinguish between the concepts of active and passive mobility, as with the former we consider the input flow into the regional health units, while the latter concerns the output flows, and therefore an economic expenditure.

However, a classification in these terms, which insists on the amount of expenditure and income, reads the phenomenon only according to an economic and businesslike perspective, focusing on the characteristics of the offer side of the process, while failing to consider other perspectives such as, for example, the sociological one, which analyses the meaning attributed to this behaviour by those actually assuming it, in this case the family of pediatric patients. In addition, the sociological perspective analyses the influences of relational factors, primarily the doctor-patient relationship, who may direct towards this choice.

Therefore, through an interdisciplinary approach, the following pages will analyse first those structural factors crucially influencing the decision to contact a health service outside one's residence region in order to solve one's health conditions. We will see that many of these choices are attributable to differences – both real and perceived – in the supply of regional health services, partly as a result of some important reforms that occurred in recent decades in the National Health System. We will next discuss the phenomenon more in detail, referring particularly to the pediatric health mobility from health services within the Campania Region to those of other regions, reconstructed through both the analysis of hospital discharge records (in Italian SDO) and the testimonies of pediatricians in some regional provinces.

From a sociological viewpoint, thinking about issues related to healthcare, whether directly or indirectly, inevitably means referring to concepts such as fairness and equality: the scientific and technological evolution that leads to an improvement of the population's health does not always co-incide with the principle of equal opportunity.

Contexts are constantly changing, thus imposing the need to provide social answers to the real needs of citizens, especially ones capable of combining resources and quality, given that the extension of rights goes hand in hand with a decreasing capacity of public funding, thus shifting the focus from ensuring welfare to the problem of cost containment. Economic systems, which are able to influence political systems, are the result of a progressive “marketisation of the economy” (Ruffolo 2009), which causes great trouble on policies control. Indeed, even if political systems arise from promoting collaboration of the various levels of responsibility, they are unable, particularly in recent years, to control financial turmoil and ensure a fair system of goods and services that meets
the real needs of citizens. Moreover, the presence of a system of fair and effective social and health services is one of the determiners ensuring, in a democracy, participation in social life and expression of individual potential for each and every citizen.

For the health system in particular, the three necessary (although not sufficient) conditions to prevent financial, social, or territorial barriers from hindering citizens’ effective enjoyment of their right to health are: funding through general taxation, fair distribution of services, use free of charge. It is no coincidence that the fundamental principles of universalistic health systems, which also inspire the Italian one – albeit with the variant of selective universalism – are: a) *universality of access*, that provides access to the various services independently from the verification of any criteria but the professional judgement on the necessity of the operation; b) *equality in the accessibility to a wide spectrum of uniformly distributed services*, that guarantees the elimination of geographical and economic barriers to the use of services; and, finally, c) *financial risk sharing*, which ensures that the individual financial contribution is exclusively determined by the person's ability to pay and not by her risk of disease and/or the services received.

Health systems inspired by these principles not only produce greater social justice, but also allow for a better control on healthcare spending. Changes in the social context and its increasing complexity have originated the need to launch in Italy a real *solidarity pact for health* – from the 1998-2000 National Health Plan. The institutions responsible for health protection and various other subjects (citizens, health professionals, volunteers, producers of health-related goods and services, and the media) are committed in this regard. Within the health field, indeed, results depend not only on the technical quality of the performance, but are deeply rooted in the empowerment of those involved and their ability to cooperate. In terms of rights and duties, citizens need to take direct, personal, and conscious responsibility towards their and others' physical, mental and social well-being, using, for this purpose, all the structures of participation and consultation employed in the territorial management of healthcare.

Following this lead, and with the reform of Title V of the Constitution, Italy adopted the logic of Fiscal Federalism.¹ In our country this principle aimed at reducing the State level on some key public sectors, such as health for example, attributing instead to local authorities – thus closest to the citizens, such as regions, provinces, and municipalities – all decisions concerning the characteristics of the supply of services. The basic guiding principle of this reform is the principle of subsidiarity, according to which, in view of the variety of citizens' needs, differing from region to region, decisions must be taken by the authorities closest to them (Mangone 2008), which may thus directly meet those needs by planning a tailor-made response system for the population.

¹ Since fiscal federalism was not expressed in the Italian Constitution, it has been introduced following the reform of Title V by the constitutional law 3/2001, art. 119 of the Constitution, which contains its principles, and it was applied following the approval of the 42/2009 law. For a discussion on fiscal federalism and healthcare, see Balduzzi (2012) and Cuocolo et al. (2013).
However, according to a 2014\(^2\) survey by OECD (Organization for Economic Cooperation and Development) and despite good intentions, 14 years after the reform fiscal federalism in healthcare proved to be a failure. According to the OECD, the constitutional reforms of 2001 have generated 21 regional health systems, with significant differences in terms of both assistance and outcomes\(^3\). This issue is highlighted also by the large number of patients, and not just children, moving from a region to another to receive health care, drawing attention also to the fact that the Northern regions still appear to be net importers, while Central and Southern Italy show, on the contrary, a steady increase in passive mobility. In terms of quality, as evidenced by the 2012 CeRM Report (Pammolli and Salerno 2012) on the Sustainability of Regional Health Systems, the regions of southern Italy – Calabria, Puglia, Sicily, and Campania – are the tail-end of the Italian health system compared to the Central and Northern regions – Umbria, Marche, Tuscany, and Piedmont.

More specifically, the data collected by the National Agency for Regional Services (AGENAS) calculated on hospital discharge records (SDO 2005-2012) which monitors the performance of 1200 Italian hospitals draw a rather exhaustive list of quality differences between the regional health structures within the country. For example, a very important indicator among the reasons why people choose to migrate elsewhere is the issue of waiting lists. The data shows that the waiting time for hip reconstruction surgery in Valle d’Aosta and Tuscany is about 3 or 4 days, while in Campania and Calabria rises to up to 6/7 days; the same goes for fractures to the tibia and fibula (Basilicata, Campania, Calabria).

The situation of hospitals in the South prove worse also with regard to the mortality rate. For example, within healthcare services of the Campania region, as many as 7 out of 100 people die for

\(^2\) The OECD – Health Division – drafted the “Review on the quality of healthcare in Italy” conducted with the collaboration of AGENAS and DG of Health Planning of the Ministry of Health, as part of the project relating to the National Center for the Prevention and Disease Control (CCM) of 2012, financed by the latter. The review was conducted through a series of scheduled interviews to representatives of the National Health System (Minister of Health and managers / representatives of the Ministry of Health, agencies, regions, academic experts) and on the basis of the indicators that the OECD regularly collects from member countries and processes.

\(^3\) The final report shows that “Italy is a very diverse country, both socially and economically (Bolzano PA has a GDP per capita of $ 39,170 and an unemployment rate of 4.1%, the Campania Region has a GDP per capita of $ 17,120 and an employment rate of 19.3% 9). This heterogeneity is reflected in the health system: despite attempts towards harmonization, regional differences in terms of quality of care remain significant (the% of patients undergoing coronary angioplasty within 48 hours after infarction ranges from ~ 15% in the Marche, Molise and Basilicata to ~ 50% in Valle d’Aosta and Liguria, the differences within the regions are even bigger: the same indicator varies from ~ 5% to over 60% if disaggregated by ASL. 30-days mortality rates following a heart attack, disaggregated by ASL, vary from ~ 5% to 18%, with a national average of 10%. The number of hospital admissions for chronic obstructive pulmonary disease it is lower in Piedmont (1.51 per 1000 inhabitants, adjusted for age and sex) and Trento PA (1.55), and higher in Puglia (3.84), Campania (3.13) and Basilicata (3.07). The same applies to childhood asthma, which sees Tuscany (0.21 per 1000 inhabitants, adjusted for age and sex), Veneto (0.23) and Valle d'Aosta (0.25) record the lowest number of hospitalizations, and Sicily (0, 95), Abruzzo (0.82) and Sardinia (0.74 the highest)” (Ministero della Salute 2015, 3).
a coronary artery bypass grafting surgery (the regions of Calabria, Umbria, and Sicily follow), and
the same goes for stomach cancer surgery, where Southern regions have higher mortality rates
(Campania, Puglia and Basilicata).

Ultimately, if fiscal federalism was supposed to help in both reducing costs and also establishing
a response system closer to the real needs of citizens, it instead increased variability in the quality of
services, in turns inducing people to move between the various regions and provinces in search of
better services. These differences tend to widen, because if it is true that «Most of the “rich” regions
can achieve a good efficiency / quality combination thus contributing to territorial redistribution
(primarily Emilia Romagna, Lombardy, Tuscany). (...) It should not be underestimated that, by at-
tracting mobility, they also receive the related cash flows hailing mainly from the South» (Pammolli
and Salerno 2012, 7).

According to OECD (2014), Italy will have to meet two main challenges: the first is to ensure
that the efforts made to contain healthcare spending do not lower quality as a fundamental principle
of governance; the second is to support the regions and autonomous provinces burdened with weak-
er infrastructure to provide services equal in quality to those of the best performing regions. We
must however point out that national initiatives aimed at improving the quality of health care are not
uniformly and consistently implemented at the regional level. Indeed, central agencies of the vari-
ous quality-related regional activities implement poor coordination, while some quality-related key
strategies are either underdeveloped or altogether missing.
1.1. The phenomenon of health mobility: between structural data and social representations

In the light of the above, for studying a phenomenon as complex as that of health mobility, it can be useful to adopt a multi-method approach which, by adopting a “triangulation of methods” as its guidance, may hold together the elements above mentioned, namely: on the one hand, the structural aspects, the existing situation, given by the offer of a specific service predisposed by the system, on the other hand, the subjective aspects, the perceived situation, thus the set of social representations that a given community builds and shares about the service system both inside its region, and outside it. In doing so we can replace administrations’ “cold” data, lightening them up with the direct or indirect contribution of the actors causing the phenomenon.

For what concerns the structural data, literature suggests various factors as causes of interregional health mobility. A useful theoretical choice is, for example, the one offered by a research based in Ferrara, which distinguishes the conditions in which mobility is a “need / hardship” and conditions under which it appears as “an opportunity” (Cipolla and Foglietta 2005).

In the first instance, the choice to migrate is inevitable, because the internal services fail to provide a response for a given problem, thus constituting the structural aspect of health mobility. As shown by other surveys, together with this aspect we should also place the issue of waiting lists: «the fact that there is a problem, either real or perceived, seems to represent for the citizen a cause that may be as structural as the absence of service, thus making moving mandatory» (Guarino 2005, 49). Among these factors, we should also include, in our opinion, the “appeal” of structures outside the region, as well as their geographical proximity and the transport infrastructure.

A different instance is when, despite there being a given service, the choice to migrate is a consolidated habit repeated through the years even for less serious diseases which could well be dealt with by the existing regional structures. In such a case, mobility becomes a “rational” choice, that is, a purpose-oriented behaviour, where the aim is obtaining the best performance. However, we can not equate this patient to a customer; such a paradigmatic option is not entirely convincing, especially for choices on matters related to health and disease. We thus need some theoretical clarifications.

The issue of what denotes “quality” in a service, beyond the most obvious structural characteristics, it is not an easy one, because what some consider as a high-level service, may be the very opposite for others. As Tognetti (2004, 11) maintains «Disease is an individual biological event and a social one at the same time, not only because various institutions take care of it in its different phases, but also because those thought patterns that allow us to identify it, give it a name, and treat it are eminently social». The role of networks in shaping the choices is also crucial, and not only symbolically so: networks gain value as they represent those ties and bonds to be mobilized as strategic resources (materials or support ones) if necessary.

The choice between several existing services or operators, indeed, is not based on a rational calculation, as with any other asset (Lardè 2000), since the quality of a health service is of uncertain definition: some judge the quality of care through the provision of objective criteria (diagnosis,
treatment, prescription), while others use of relational criteria (listening, trust, empathy). This opacity is usually dissipated through judgement devices residing in the trust inherent in the interpersonal network: «Through word of mouth, are transferred stories, personal experiences, information about a service or an operator, which allow individuals to choose rationally» (Karpik 1996). Using Boudon’s arguments (1998), the rationality of patients is not based on a costs-and-benefits calculation, thus on a consequential logic, but rather on a system of arguments or reasons considered important: one can, for example, decide not to have surgery because she do not have confidence in medicine or because the surgeon does not have a good reputation, and not because the chances of success are calculated on the basis of a recognized risk. In other words, the patient argues her choices taking into account the meaning and potential value these may have for the relationships network in which they are integrated. Within these networks people develop and spread social representations of services, which can be equalled «to an organized set of opinions, images, beliefs, and information that relates to an object or a situation» (Abric 1994, 15). In networks the quality of a health service will depend not only on the technical performance itself (for example the reputation of a particular department, or a particular doctor), but, as some studies show, even on the humanization of service, the ability to welcome patients, the attention paid to the doctor-patient relationship, the opportunity to take charge “holistically” of the person before the disease.

Together with this factor, which sociology well allows us to evaluate, we need to consider another issue, often overlooked by medical and epidemiological research, related to the role of the GP, in this case the pediatrician, pointing towards specialized services already existing in the region «as she is part of a network organization together with the other pediatricians and GPs in her district and with the regional and hospital services, she is a significant player in the dynamics of demand and supply of healthcare services» (Agnoletti 2005, 69). The current trend sees health as not limited to mere biomedical aspects, but values more and more the cultural and relational ones, and the figure of the GP – or, in this case, the pediatrician – is its ultimate expression. The pediatrician in particular, given the kind of patient she deals with, i.e. the child, must always keep in mind the importance of the relational dimension and the humanitarian ethos in addition to the technical and practical angle (Mangone 2010; Mangone 2013); the quality of her service depends on her ability to take charge of the young patient according to a “holistic” approach; a service in which both the patient and her whole family can find answers at their best (Masullo 2008).

Generally speaking, it is thus fair to assume the family’s pediatrician to be the first party through which the decision to migrate inevitably passes. Obviously, such a choice does not always happen. The need to rely on the pediatrician when taking decisions varies according to different elements.

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4 In this case, issues related to moving are not important, nor are those connected to the quality of hotel services. The main aim is the relation.

5 For example, the research based in Ferrara showed that if 26.9% of the interviewees had followed the doctors' advice, 30.9% did not refer to its GP. 20.7% gave the patient freedom of choice (Cipolla and Foglietta 2005).
This propensity to trust the doctor varies not only according to her relational style and expertise in responding to the problems, but also depends on a number of variables mentioned in the literature, such as socio-economic status and education level of parents. A higher education level is also connected with greater *empowerment* capacity, leading to the self-determination of one's own choices, which results, in the era of web society, in seeking resources online if required (Masullo 2014).

2. The phenomenon of pediatric health mobility: a research in Campania

Several studies analysing cross-border health mobility have so far paid little attention to its domestic component, *i.e.* movements between the services offered within a given country. In addition, they paid little attention to the phenomenon of health mobility from Southern to Northern Italy in general. This last aspect is very important not only for the social and clinical problems that inevitably ensue, but for the enormous costs affecting regional healthcare budgets. The present paper starts from a research that called on doctors, sociologists, and economists to cooperate with the aim to identify the discriminating socio-cultural, epidemiological, and structural variables affecting pediatric interregional mobility in the Campania region. Among other purposes, the analysis aims at evaluating, and eventually reinforcing, starting from its results, the current services system, thus trying to stem at least that part of mobility defined as “avoidable”.

The methodological approach chosen, in full compliance with interdisciplinarity, consists of several stages – non-consequential ones, because the sociological perspective's contribution to the investigation intervened later, compensating “medical and epidemiological” data, which doctors considered as not comprehensive of all the reasons leading to passive mobility. The first stage consisted in the analysis of hospital discharge records (SDO) extracted from the Regional Health Agency (for the years 2006 to 2010)\(^6\), divided by MDC (Major Diagnostic Categories), ACC (Aggregate Clinical Codes), and Discharge procedures\(^7\), which allowed doctors to “photograph” the current situation, highlighting any shortcomings in the regional services system in Campania. This stage was followed by the presentation of a structured questionnaire to the families of pediatric patients admitted to two well-known hospitals outside the region – Bambino Gesù in Rome and Gaslini in Genoa.

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\(^6\) The data considered refer to the period 2006-2010, because the Regional Health Agency of the Campania region has not yet made available the most recent data.

\(^7\) The DRG system allow to classify discharged hospital patients into homogeneous groups with respect to the resources employed. The aim is to economically quantify the use of resources and thus be able to calculate the amount of each admission. DRGs are grouped into MDCs, which represent 25 categories divided, according to clinical-diagnostic criteria, by organ and apparatus pathology. ACC represent 259 classes of diagnosis codes and 231 kinds of surgeries / procedures to which refer ICD9CM's diagnosis and intervention codes. SDOs for each DRG-MDC have also been divided into Day Hospital and intra- and extra-regional Ordinary Admission at Pediatric and Specialistic Units.
both experiencing the highest inflows of patients coming from the Campania region. This second stage was also taken care of by doctors.

The sociological survey opted for qualitative analysis techniques and instruments, in order to shed light on other aspects of the phenomenon that the above-mentioned approaches, given their specific nature, did not allow to bring into focus. In particular, through focus groups and in-depth interviews techniques, it attempted to understand the phenomenon from the perspective of those who generate it, by analysing:

- the role played by pediatricians as gatekeepers for second level specialized tests, and their opinions on regional healthcare services;\(^8\);
- pediatric patients' families' social representations of both regional and extra-regional services, still in progress, with the aim of seizing the complex web binding representations and the reasons leading to choose passive mobility\(^9\).

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\(^8\) Given the current impossibility of access to the most recent SDO data, the use of focus groups in this part of the research has proven to be useful to “photograph” the doctors' perceptions on the situation of regional health services.

\(^9\) It should be noted that in this paper the focus is solely on the description of the results from the focus groups with family pediatricians.
2.1 Pediatric mobility in the Campania Region: analysis of medical and epidemiological data

Once specified the elements needed in order to theoretically evaluate the reasons behind the decision to migrate, we must first ponder on existing data, *i.e.* on those researches, mostly medical and epidemiological, that previously framed the health mobility phenomenon for the Campania region. This step will define the structural framework that allows to distinguish that part of pediatric mobility which is seen as “inevitable” from that where the influence of individual and relational aspects on the phenomenon is higher.

As pointed out above, we do not have more recent data than the SDO 2006-2010 for the Campania region, however, with the survey *Noi-Italia* 2015 (Istat 2015), Istat has let general data on regional health mobility for 2012 be known (Tab. 1). These data show that the main attractions are concentrated in the Centre-North of Italy and that the big regions recording a high emigration index are located in Southern Italy (Basilicata and Molise over 20%); the Campania region registered an index of over 8%. When considering together the two indicators of emigration and immigration in the Cartesian plane, the Campania region is among those not compensating the two flows: it is in deficit.

**Tab. 1 - Healthcare-related mobility index**

As stated in the introduction, the studies about young patients are poorly represented in international literature. Existing ones have demonstrated that pediatric mobility looking for a better
healthcare quality is a significant phenomenon especially in the regions of Southern Italy, including the Campania Region (Vaijro et al. 2012). Although at the moment the Campania region can count on the most qualified regional reference centres for many pediatric subspecialties – mainly because of the two university clinics and the regional pediatric hospital Santobono in Naples\(^{10}\) – preliminary data in our research suggest that hospitalization outside the region for pediatric patients with the aim to get proper and quality healthcare is not uncommon (Vaijro et al. 2012).

The analysis of extra-regional pediatric SDOs, for the years 2006-2010, showed that the total number of hospital admissions outside the region was 68,316 (Tab. 2), including 16,299 admissions in Pediatric Units, and 52,017 in special medical centres (for example, Stella Maris Foundation in Pisa, specialized in neurological diseases, Dermopathic Italian Institute in Rome, specialized in skin diseases, etc.).

The most represented discharge specialist disciplines were not only child neuropsychiatry (n = 6,666), orthopaedics (n = 5,833), pediatric surgery (n = 3,809) and plastic surgery (n = 3,339), but also a significant number of pediatric internal subspecialties. The latter must therefore be added to the previously mentioned extra-regional hospitalization at pediatric hospitals and structures. The “other” column includes different branches such as otolaryngology (n = 2,795), ophthalmology (n = 2,525), neurology (for adult patients, n = 1,913), dermatology (n = 935), pediatric neurosurgery (n = 902), surgery (n = 867), pediatric cardiac surgery (n = 802), as well as a number of pediatric subspecialties (n = 32,370).

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\(^{10}\) According to a recent mapping (Vaijro et al. 2012) the main reference centres for pediatric subspecialities in the Campania region are: Azienda ospedaliera universitaria Federico II di Napoli (Home artificial nutrition, Pediatric HIV infection, Chronic inflammatory diseases of childhood, Celiac disease in childhood, Diagnosis and treatment of fibrosi, Pediatric rheumatic diseases, Rare diseases, PKU, Clinical molecular biology, laboratory genetics and diagnostic of congenital metabolic diseases); SUN - Seconda Università di Napoli (Neurofibromatosis 1, Pre- and post- bone marrow transplant management, Pediatric diabetology, Infant thalassemia and other hemoglobinopathies, Celiac disease in childhood, General and transplant cardiac surgery); AORN Santobono Pausilipon (Leishmaniasis, Pediatric bone marrow transplant, Organ explant, Retinopathy of premature children, Coagulation disorders, Pediatric cochlear implants).
Tab. 2 - Rates of the main causes of pediatric health mobility in Campania (2006-2010)

<table>
<thead>
<tr>
<th>Pediatric specialties</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervous system diseases</td>
<td>2,361</td>
</tr>
<tr>
<td>Digestive, metabolic, &amp; nutritional dis.</td>
<td>2,190</td>
</tr>
<tr>
<td>Gastrointestinal diseases</td>
<td>1,900</td>
</tr>
<tr>
<td>Musculoskeletal &amp; connective tissue-dis.</td>
<td>1,073</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>1,716</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>1,249</td>
</tr>
<tr>
<td>Ear, nose, throat diseases</td>
<td>795</td>
</tr>
<tr>
<td>Infections diseases</td>
<td>904</td>
</tr>
<tr>
<td>Multivisceral diseases</td>
<td>467</td>
</tr>
<tr>
<td>Myeloproliferative diseases</td>
<td>456</td>
</tr>
<tr>
<td>Skin diseases</td>
<td>417</td>
</tr>
<tr>
<td>Renal diseases</td>
<td>343</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td>275</td>
</tr>
<tr>
<td>Eye diseases</td>
<td>222</td>
</tr>
<tr>
<td>Reproductive diseases</td>
<td>207</td>
</tr>
<tr>
<td>Neoplastic diseases</td>
<td>181</td>
</tr>
<tr>
<td>Others</td>
<td>1,293</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medical branches and Internal specialties</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmology</td>
<td>2,785</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>2,532</td>
</tr>
<tr>
<td>Neurology</td>
<td>1,013</td>
</tr>
<tr>
<td>Endocrine, metabolic &amp; nutritional diseases</td>
<td>1,545</td>
</tr>
<tr>
<td>Nephrology</td>
<td>1,380</td>
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<tr>
<td>Neurosurgery</td>
<td>1,154</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>1,178</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>1,162</td>
</tr>
<tr>
<td>Cardiology</td>
<td>1,110</td>
</tr>
<tr>
<td>Dermatology</td>
<td>915</td>
</tr>
<tr>
<td>Pediatric urology</td>
<td>802</td>
</tr>
<tr>
<td>General surgery</td>
<td>862</td>
</tr>
<tr>
<td>Pediatric heart-surgery</td>
<td>802</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>677</td>
</tr>
<tr>
<td>Pediatric nephrology</td>
<td>636</td>
</tr>
<tr>
<td>Hematology</td>
<td>524</td>
</tr>
<tr>
<td>Others</td>
<td>2,577</td>
</tr>
</tbody>
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The overall trend of the region is on average similar through the various provinces in Campania, except for the largest proportion of extra-region admissions for haematology for residents in the Benevento ASL, for pediatric urology for residents in the Salerno ASL and for pediatric surgery for residents in the Avellino ASL.

The analysis of pediatric specialities for 55,984 medical DRGs (out of 68,316 total extra-region admission records in Pediatric Unit and related specialist facilities) shows that about 50% occur mainly for nervous system disorders, mental disorders, kidney and urinary tract disease, musculoskeletal and connective tissue disorders and myeloproliferative disorders, and undifferentiated tumors, with almost the same trend throughout the various provinces. The adjusted total cost paid by the Campania Region for health services amounted to 124.7 million euro. The average drain index of children living in the Campania region (calculated on the total of extra-region hospitalizations, both at Pediatric Units and at specialist centres), amounted to 10.6%, with the highest values for children living in the ASLs of Benevento (19%), Caserta (18%), Avellino (17%), Salerno (15.6%), and lowest for the ASLs of Napoli 3 (7.4%), Napoli 2 (5.8%), and Napoli 1 (5.6%).

The analysis confirms the mobility of a high percentage of children from Campania, in
particular towards the Children's Hospital Bambin Gesù in Rome (23,430 admissions), followed by
the Gaslini Institute in Genoa (5,557 admissions).

Ultimately, even though the Campania region's health system does offer some excellences,
particularly for certain branches of medicine, there still is an increase in pediatric mobility, not only
for serious diseases, but also for minor illnesses or that could be addressed by the regional health
system's services.

For what concerns the reasons behind this increasing drain, the above mentioned questionnaire
given by doctors to the families of children from Southern Italy admitted to the hospitals (mostly for
neurological, gastroenterological, nephrological, hemato-oncological, and heart disorders), shows
that the decision to move is taken, for 35% of cases, at the suggestion of the very pediatricians from
the Southern Italy hospitals where some patients were initially admitted, and only in a minority of
cases of their family pediatrician (18%) or friends and relatives (16%). Migrating families (65%)
had already received a clinical report regarding their child by the medical staff of hospitals in
Southern Italy. In most cases follow-up procedures were expected to be within an extra-regional
structure (73%).

A good portion of the sample reported a real or perceived lack of specialized centres in Southern
Italy as the main reason of extra-regional mobility (81.5%). Advanced technology, organization and
skills were the most important differences detected from the interviews. The number of families
with low educational attainment was higher than those with secondary education or higher (58% vs.
42%).

2.2 Pediatric health mobility in Campania: the pediatricians' point of view

As described above, family pediatricians play an important role in our health care system not
only because they represent the first consultation for patients, but also because they are the ones
guiding patients towards services both in their region and outside of it. Focus groups have
highlighted several aspects that may help to better understand the phenomenon of health mobility in
Campania11. Alongside the structural factors pointed out by doctors, the sociological approach helps
in highlighting and evaluating the reasons prompting pediatricians to direct their patients towards
treatment centres outside the region, thus the focus technique (Acocella 2008) has proved to be
particularly suitable for this purpose.

Through this tool we have been able to analyse the social representations held by pediatricians

11 A first focus group was carried out with family pediatrician of Naples (administrative centre) ASLs (Focus
1NA), two more (Focus 1SA and 2SA) with family pediatricians from Salerno ASLs (1 administrative centre
and 1 province). The full research design includes four more focus groups that will include family pediatrician
from Naples (province) and from the remaining Campania provinces not yet analysed: Benevento, Caserta,
Avellino.
about the regional health system, and particularly about the second-level centres to which they should hypothetically send patients, as well as the social representations of nursing facilities outside the region: the cutting edge care offered, the organization of these services, the skills acknowledged to their colleagues, but also the connection and ease of communication with the centres of excellence, are all factors used by pediatricians.

Starting from the considerations expressed in the focus groups (two comprising pediatricians from the province of Salerno, and one of pediatricians from Naples, capital of the Campania region), it is possible to identify some common elements, as well as differentiation ones.

Family pediatricians generally recognize the increased capabilities of today's patients – in this case of the children's families – to obtain information through the new media, such as the Internet and, therefore, to choose for themselves the care centre best suited to the problem they face; ultimately, therefore, the recommendation function previously exercised by family pediatricians is gradually decreasing.

We must distinguish between the pre- and post-internet era. What I am witnessing today is that sometimes the patient bypasses also the advice of his doctor because she gleans information autonomously on the internet, she can often book [a medical appointment] much sooner than in our area, and therefore, bypassing my advice, she independently turns to a structure outside the Campania region (family pediatrician, focus 1NA).

Now we have understood, that people know how to choose, they really go to the right places, where the quantitative relation between the quality of care and the quality of reception is one to one (family pediatrician, focus 1NA)

Pediatricians from both Naples and Salerno acknowledge the existence of several excellences within the regional second-level health-care system, such as the Federico II University Hospital and the Santobono Hospital, especially for specific diseases. For some facilities family pediatricians even recognize an active mobility, as in the case of oncology hematology and neurosurgery at Santobono;

Regarding excellences I'll mention the case of oncology. Whereas before, in general, the entire oncology population from Campania used to emigrate to Pavia and Genoa, particularly to the Gaslini, now [the emigration related to] the treatment of cancers of the blood and lymphatic system; leukaemia and lymphoma are mostly treated here, indeed, people from Southern Italy come to Naples, which is now an attractive excellence (...) for example, for neuro-oncology, cerebral tumors, they come to the Santobono in Naples to undergo surgery, with doctor C.; because he is the best or second best neurosurgeon in Europe (...) given that it is also a structure that guarantees, even with the difficulties now experienced in Campania, radiotherapy and chemotherapy following surgery, neurosurgery at the Santobono is essentially becoming an oncological neurosurgery (family pediatrician, focus 1NA)
As already reported through the secondary data, passive mobility is caused instead for some pediatric subspecializations, that in the region would be absent or deficient, such as, for example, pediatric orthopaedics, neuropsychiatry, pediatric dermatology etc.;

The patient is discouraged, especially because she cannot find a solution to her problem in the existing healthcare system, and thus she turns elsewhere, but this is not for all branches, but for “ancillary” branches – I am talking especially of those that somewhat escape pediatricians’ formation, not the general pediatric internal medicine, but the subspecialties (...) For example pediatric orthopedics, pediatric dermatology, pediatric endocrinology, neurology, and especially neuropsychiatry (family pediatrician, focus 1NA)

There are some shortcomings, I take the example of pediatric dermatology that in Naples that is virtually non-existent, it exists only in the Santobono [hospital], but is very much lacking, a complex diagnostic, for example, congenital diseases of the skin, there is no service, there is not someone who deals particularly with complex angioma (...) There is a dermatology that is little more than day surgery (family pediatrician, focus 1NA)

But doctors can point out also other reasons: for example, Neapolitan doctors, while acknowledging a certain quality of the system in terms of skills offered, especially concerning the accuracy of the diagnosis, locate the problem in the territorial system for taking responsibility of the patient, as it happens, for example, for the treatment of neuropsychiatric diseases and disabilities in general

Most external advices concern the disability sphere, thus the whole issue of pervasive developmental disorders that are not sufficiently addressed at our facilities because the patient does not meet with a global network framing the problem in a short time and giving therapeutic context, thus I noticed that my patients for this kind of disorders often tend to seek advice especially at the Stella Maris [hospital] in Pisa, this for neuropsychiatry, or the Bambin Gesù (family pediatrician, focus 2NT)

For internal pediatric medicine, they stay here, while those who look for somewhere else are those patients who – as they say – must be accepted [into the health service unit], or patients who are related to collateral branches, such as otolaryngology, orthopaedics, that for children does not exist in Naples, scoliosis, and especially neuropsychiatry in terms of disability (...) thus the child that goes to the neuropsychiatrist to get a diagnosis for pervasive personality, has the diagnosis and in a short time also, but she has no path of rehabilitation. For example, an autistic child should turn to territorial [healthcare] services, which are non-existent (family pediatrician, focus 1NA)
In documenting what may be the reasons for migrating, doctors reflect on the characteristics of second-level structures’ supply in Naples, focusing in particular on the organization of services, which poses complexities for accepting the patient, often because of long waiting lists. Difficulties in terms of communication occur between structure and pediatrician, who can not follow her client, in the diagnostic and therapeutic iter, in the end resorting to to facilities outside the region, which are perceived as well-organized, as reported by the two testimonies below:

An 8 month old girl comes to my office because they [the parents] were concerned about the presence of genital hair, great astonishment on my part (...) I contact Naples, in this case Santobono, the endocrinology unit, because I immediately understand that it is a serious problem. I talk to the contact person, I explain the situation, and he said, alright, she definitely has to be examined, please contact the reservation centre and book [an appointment]. I do all this, but it is absolutely unthinkable that I can wait for the appointment. The appointment was three months ahead, at which point the parents ask me what to do, at that time there were no other places available here in Campania. They say they have relatives in Siena. At the University of Siena, in pediatrics, I contact them, within 24 hours I get the appointment. The girl had an adrenal gland carcinoma, she was examined immediately, within two or three days she had already been diagnosed, the tumor was removed, she did not undergo any chemotherapy, because fortunately [the tumor] was well located (...) the child is living she has not had any problem from this unfortunate experience, and Naples has never called us back (...). That is, here we do not have a growth problem, she has clitoral hypertrophy, she probably has a malignant disease, you can not say call the reservation centre, because there are things that have a certain urgency, other things that can wait. Siena did not make me wait! (Family pediatrician, 2SA)

Often when I just can not do anything, I overcome the problems by sending them [the patients] to the emergency room! I did it with a little girl with leukaemia, she could not walk anymore (...) I tried to contact the Santobono, leaving aside the fact that they do not respond, let alone on Friday, so I sent her to the emergency room. Unfortunately here following institutional channels do not work! Here in Naples it does not work, but if you pick up the phone and call a colleague in the North. I sent a little girl with mammary agenesis, in Genoa, to Dr. F. she has been so cordial, she said, make her come, and within a few days I found the solution to the problem. In Naples I can not do that, I have great difficulty. The same thing at the S.Leonardo Hospital, if you call a colleague they raise infinite issues, thus I own I give up, I send them somewhere else, especially if I have an urgency to manage (family pediatrician, focus 2SA)

Contrasts of a relational nature are often created with hospital colleagues; pediatricians are especially very critical of certain organizational practices that do not allow the best treatment for the
patient:

Many times within the university structure, I am talking about I and II teaching hospital, you do not find a sufficiently experienced and knowledgeable contact person, instead you are faced with the trainee, the mother realizes that there is not the ability to manage the problem in an ultra-specialized way and often they migrate, as it happened recently for pediatric rheumatology, where they have not run into the doctor in charge, but into the intern on duty, that hiding behind a pseudo-diagnosis has left the mother even more confused. At that point we called the Gaslini hospital, where I was lucky enough to contact directly via e-mail this Prof. R. that within twelve hours I was called back first by the secretary, then by the head nurse, he took care to organize immediate medical consultation, directly with this professor. Public Hospital, she [the mother] did not paid a penny. Elsewhere, I'm sorry to say, in spite of all our great minds, but the great minds do not stoop to the level of outpatient counselling, but delegate non-experts (family pediatrician, focus 1SA)

The Bambin Gesù is a hospital that works well, I think because it also has more economic structures and more MDs that deal with the problem, because the current flaw of the Federico II University Hospital is that those involved first-hand with the patient are postgraduates and not MDs (...) it so happens because they say they have little time for care, must do research and deal with other things .. If we send the patient A, she wants something more, it is normal that a resident has a different approach – also at empathy level – with respect to the one sported by a super specialist (family pediatrician, focus 1NA)

In some cases, moreover, the pediatrician sees herself as not recognized, in her professional mandate, by colleagues from university facilities

Because often the hospital doctor and in particular those involved in a subspecialty, runs the risk that it becomes shall we say a world apart. They do not realize that these children then return to the pediatrician. We need the structure [the hospital] for a moment, but then the child returns to the family pediatrician. The problem if they keep acting like this is not only the structure loses its relationship with the family pediatrician, but I forgive it if sooner or later it happens also with the child, because then the first time she goes there and they treat her badly because they are messed up, they have an urgency, they miss a meeting, there is no longer an excuse! (...) Elsewhere, they understood this, they do what is strictly necessary at the hospital, then go to your doctor, this is your therapy, they want to establish a relationship with the doctor, because the child goes back to the family doctor. (Family pediatrician, focus 1SA).

Yes neurosurgery is one of the best departments, but from a technical point of view, certainly, in terms of relationships between colleagues, I do not say that we bickered, but almost! But from the scientific point of view, because they have operated, and very well, a child (...) who for the kind of problem he had I insisted that he should get vaccinated, because he was a child at risk, the mother
agreed. But surgeons were steadfastly opposed, and this until he was sixth months old, then I wrote
them, I wrote to my colleagues, to make them understand its importance. Oral answer, to his
mother, they said: Tell him that as long as he is under us he does what we say, they did not even
bother to answer! So what do you thing, am I tempted to send someone there? It does not take
much, “Dear colleague, I saw this child of yours today, you know, I do not completely agree with the
things you say, what do you think? Can we meet? Come see me!” But they just start from the premise
that we are incompetent (family pediatrician, focus 2SA)

For pediatricians, thus, mobility is the outcome of those who, not having had a clear answer to
their problem in the regional healthcare system, search elsewhere for a more structured solution,
considering this as one including more appropriate “reception” and “support” paths (such as those
that parents say they encounter at the Bambino Gesù Hospital in Rome), aspects which, in the
regional here examined by pediatricians, appear to be largely lacking.

What families say when they go to some centres of excellence outside the region and in particular I
am talking about the Bambino Gesù, which has become a bit of a magnet for all sorts of things (...) We
must consider various aspects, when it comes to capacity diagnosis and treatment there is no
difference with our centres and very often there are superior specialists. But what families say: the
organization, the acceptance and support of children in hospital and their families, especially, the
meeting with the families, in short, there is a path! the patient is taken in charge from arrival to
discharge, and is handled very differently from how it happens here (family pediatrician, focus 1NA)

Do you know what the other difficulty is, the Neapolitan contact many times gets tired of going
behind the problems of the patient (--) perhaps they are spoiled by the way we act, our
overprotective attitude, towards these patients that we follow up to the point of excess, so they have
troubles even when they are sent to the super-specialist, they do not feel followed, they do not find
the same openness, by which you call them, you give them advice on medication, at the S. Raffaele
hospital in Milan this never happens; I sent them three cases, they always manage to find a contact
person for their everyday problems (family pediatrician, 2SA).

Another important element highlighted are “migrant” specialist pediatricians from the North
who find much of their “customers” in the South, as it happens for some specializations that are
lacking in the area, for example for urogenital diseases.

I am always very sincere. For some, the patient is a customer. Meaning that there are also many top
specialists who come here to Southern Italy hosted by private institutes here, thus attracting
customers, and then carry them away. They come here to recruit customers (family pediatrician,
There is a specialized branch that generally works like this, namely urological surgery, which is virtually colonized by Vicenza, not one, but many pediatric surgeons from Vicenza come to the same studio in Naples, they come every 15 days, because here there is no expert. (...) In Naples if I were to recommend urologic surgery at a certain level, not the basic level, for diagnosis perhaps yes, but a complex intervention such as complex genital malformations, bladder dystrophy, I have seen some work very well done, very well paid, because the customer does not pay anything to the Hospital, in Naples they pay absurd figures (family pediatrician, focus 1NA)

Finally, pediatricians make some suggestions with the aim to strengthen the current system, both providing those specialization disciplines which the structures are currently lacking (unavoidable mobility) and suggesting initiatives to strengthen the organizational aspects (avoidable mobility) in particular by improving communication between pediatricians and family and colleagues of second level centres, introducing reception measures and protocols allowing for a most appropriate management of the pediatric patient etc.

Behaving honestly, today today we should centralize analysis thanks to the new tools available, in the United States they even send x-rays via email to India because they are good and save money, but it is right, if we have the means and at the same time it would be fairer for ultra-specialized sectors to have super smart people on the move, with sessions, if we have a urologic surgery session in Naples for the most severe cases, if the Vicenza doctor is good (family pediatrician, focus 1NA)

There is no lack of concern for the realization of these initiatives mainly because of the austerity spirit currently characterizing the national health system, given the continuing cuts and spending restrictions imposed by health managers.

Some might have missed this, many years ago. Since the 70s the National Health Service is constituted by law and from the will of Catholic reformists, it had a sure allocation of funds, resources and objectives. With the advent of the Regions, the health service is now no longer called national, the state has abdicated to the regions, which may have very different health goals. If you see what they do with vaccinations between Sicily and Lombardy, and about Trentino nobody understands anything. (Family pediatrician, focus 1NA)

The issue currently most important moment in the Campania Region, being a region which has a repayment plan and whose Health is not entrusted to doctors (...) Not being a doctor, but a technician, she must ensure proper economic return. So what to do, someone who is not a doctor cuts, say 5%, everyone has to reduce expenses by 5%! And of course this goes against all logic, compared to what we have said until now, because you cannot cut resources to a hemato-oncology
centre that works well and attracts patients from outside. There are of course situations in which the reduction should be not 5% but 50%, and yet it does not happen, but also for lack of knowledge, because managers tend only to reduce expenses. (Family pediatrician, focus 1NA).

Conclusions

At its origin the reform of the National Health System (Legislative Decree no. 502/92 and no. 517/93) has tried to achieve a balance between the citizen's right to choose if between public and private health facilities, and the identification of essential health services. Later, the Legislative Decree 229/99 introduces the concept of basic and uniform assistance levels that are given together with the identification of financial resources. This selection creates a state safety net protecting from the great health risks while leaving space for manoeuvre for the private system. The introduction of businesslike management criteria in local health units and public hospitals marked a change: if until then a clinician could afford the “luxury” to look the economic consequences of their actions with disdain and inattention, since this moment the economic evaluation of all programs and interventions has become an integral part of the profession. For decades the system acted as if the financial resources allocated to the health sector were endless; today we talk in terms of budget, that is, fixed funds aimed at a defined purpose, priority in allocating resources not only in terms of ministerial organization and planning, but also at the level of individual local health authorities.

The question is problematic in many ways: who should receive health and how much of it she should receive, the moral problem (ethics) and the practical problem of controlling health spending trends is now a matter common to all industrialized countries. The scarcity of resources automatically generates the necessity of having to make choices; containment policies are adopted by all the systems mainly in response to changes in society that results in a growing demand for health services that often are “processed” by the same people by moving to other regions to meet their needs “indirectly” raising health care costs for the region from which they “emigrated”.

Indeed, as we have shown above, health mobility in addition to causing stress for patients and their families, causes significant cost to the region of origin and subtracts economic resources for the development of their human and technological activities.

Based on the existing data, extra-regional pediatric hospitalization in the Campania region it occurs mainly due to a (real or perceived) lack of adequate and / or well-organized facilities able to provide updated support for children with complex diseases. However, unexpectedly, mobility also involved medium- or low-complexity conditions. This puts the focus on the importance of the perceived quality of the regional services system by patients and their families. Although at this stage of the research is not possible to draw a more accurate picture of this perception, pediatricians' statements lead us to assume a certain widespread lack of confidence concerning the services offered (responding to citizens' requests) provided for in the system, at least for some specific problems, such as for disabilities, or all those pathologies which require a more complex approach
towards the patient which in local health services would not find a full response.

The interdisciplinary approach used for this research has proved useful to draw a more complex picture of the phenomenon. If the medical data highlighted the need for strengthening or streamlining some pediatric existing resources (for example, urology, neuropsychiatry) that could help reduce the percentage of avoidable mobility, the contribution of the sociological perspective has allowed to consider other useful elements for the understanding of the phenomenon of healthcare-related extra-regional pediatric mobility. Pediatricians, while recognizing some of the strengths of the regional structures – that on the technical and diagnostic level are no different from those of other regions – maintain that such services are much less efficient in their organization. Moreover, on the supply side, the value acquired by the hospitality aspect must be given due consideration, given that structures outside the region, particularly for the pediatric patient, appear to be much superior in this respect. But this is not the only issue that emerged from the focus groups. As we have seen, also family pediatricians in the Campania region help fuel the phenomenon of passive mobility, in particular by pointing patients towards facilities outside the region because of the communication difficulties experienced with second level service organizations, in particular with hospital specialists (or interns), who often fail to recognize their professional value, as well as the most direct experience they have of the patient and her medical history.
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