Comparing National Health Models

Reference: Bhattacharya, Hyde and Tu (2014)

Three health models

Beveridge
Bismarck
American

Beveridge model

- Single-payer insurance
- Public provision of health care (physicians are government employees)
- Very little cost sharing at point of service
- Emphasis on equity
- Examples: UK, Scandinavia, Canada, Australia, NZ

The Beveridge model

- **Universal, single payer insurance:**
  - All citizens receive insurance from government, financed by taxes and not premiums
- **Public health care provision:**
  - Hospital and clinics run by the government
- **Free care**
  - Care provided for free at government hospitals
  - Free at the point of care
  - Some exceptions for prescriptions drugs, eye care, and dentistry

Aim of the Beveridge model

- Health care is a good provided by the government and paid for with tax revenue
- Allocation of health care based on **need** and not ability to pay
  - Eliminates *price rationing*
  - Promotes **equity**

UK 2002-08 Reforms

- From 2002 to 2008, three large reforms injecting <u>competition</u>:
  1. Move hospitals away from global budgets to a "**payment by results**" (PbR) system
  2. Allow patients freedom to choose between providers
  3. Give hospital administrators greater autonomy in managing hospitals.
- Unlike previous reforms, these reforms set uniform prices for all hospitals
  - Hospitals can compete only on quality, not price

Issues

- Queue reduction
  - Decrease demand
  - Increase supply
- HTA
- Competition

Health technology assessment (HTA)

- HTA more a central issue in Beveridge countries because:
  - Government pays for health care, so HTA plays a large role in cost containment
  - Government delivers health care, so HTA determines which services are available and which services are not
  - Patients may have to go abroad to access services denied coverage by HTA
- HTA decisions can be very controversial because they can determine who gets treatment and who does not

Competition

- Many of the problems faced by Beveridge systems (long queues, centralized HTA) not found in countries with private systems
- Hence, many Beveridge systems have tried to experiment with elements of competition while simultaneously preserving solidarity
- Uneasiness with private markets

Bismarck model

- Compulsory private insurance
- Private hospitals and doctors
- Strict price controls set by government (sometimes in negotiation with doctors and hospitals)
- Examples: Germany, Japan, Switzerland, Netherlands

Key traits of Bismarck health care systems

- *Universal insurance*
  - All or nearly all of the population has health insurance coverage, either through a plan sponsored by an employer or through the government
- *Community rating*
  - Insurance is financed through taxes (based on income), *not* premiums (based on health status) operates under managed competition
- *Regulated, private health care provision*
  - prices are set by the government in negotiation with private providers

Managed competition

1. *Minimum standards:* each insurance contract is required to meet a minimal standard of care; There are also limits on copayments and deductibles.
2. *Open enrollment:* insurers may not reject any eligible customers, even if they are unhealthy.
3. *Compulsory participation:* customers are mandated to have and pay for insurance coverage at all times.
4. *Community rating:* insurers can not set premiums using **risk rating;** instead they must be **community rated.**

Price controls

- *Price controls* are prices negotiated between providers and purchasers
- Essentially, a price control negotiation allows the purchasers of health care (sickness funds) to band together and exercise *monopsony power*
- This can counterbalance oligopoly power and lower prices, but prices set by a central agency can distort medical decision making
- The process for setting prices would ideally result in a price for each activity equal to its marginal costs of production.

Germany

- German patients have the option of choosing among all available health insurance plans, including plans run by other companies or faraway regions.
  - These plans are nominally private entities, they are extensively regulated (managed competition).
- Premiums to finance insurance are collected as **payroll taxes**, and vary only with income, not health.
- Patients and insurers are free to choose their health care providers, who can compete to attract them.
  - Providers must compete based on quality rather than price

Solidarity and liberty

- **Solidarity/equity:** the poorest and sickest members of society are supported by the system, which grants subsidized health insurance to those least able to afford it.
  - This subsidy is borne by the wealthiest and healthiest, who pay high taxes and actuarially-unfair premiums to keep the system afloat.
- **Liberty:** patients and doctors are at liberty to make fundamental economic choices, like which hospital to visit, which insurance contract to take, or where to open a new clinic or hospital.

Issues

- Adverse selection vs risk selection
  - Adverse selection refers to the behavior of insurance customers, while *risk selection* refers to the behavior of insurance providers.
- *Gatekeeping*
  - to limit health care expenditures, many Bismarck countries have initiated gatekeeping reforms.
- *HTA*
  - many Bismarck countries have also moved to incorporate HTA into their health care systems

How do Beveridge and Bismarck models compare?

- Beveridge systems emphasize equity and equal access to care, while Bismarck systems emphasize patient choice and provider competition.
- Countries that have adopted a Bismarckian health care system tend to have higher national health care expenditures compared to the Beveridge countries.
- Reforms in Beveridge countries have focused on increasing choice for patients and competition between providers.
- Reforms in Bismarck countries have introduced gatekeeping and managed care tactics that restrict patient choice in certain ways.
- The two models seem to be converging, and may one day be hard to distinguish.

American model

- Central role of Private markets
- No mandate for universal insurance
- No price controls
- Public insurance for selected groups: elderly and poor
- Examples: unique to the US

The American model

Major characteristics:

- **Private health insurance markets:**
  - The non-elderly and non-poor seek insurance on the private market, which is centered around employer-based health insurance pools.
- **Partial universal health insurance:**
  - Subsidized universal health insurance is provided to two vulnerable subpopulations: the elderly (through Medicare) and the poor (through Medicaid).
- **Private health care provision:**
  - Most hospitals and doctor's clinics are private. While there is some antitrust regulation, there are few legal restrictions on where doctors can practice and hospitals can open. There are also no direct price controls enforced by the government.

THE ITALIAN NATIONAL HEALTH SYSTEM AND ITS REGIONAL HEALTH SYSTEMS

State of Health in the EU Italy Country Health Profile 2021
https://doi.org/10.1787/5bb1946e-en.

- *Life expectancy in Italy is among the highest in Europe, but it fell at least temporarily in 2020 because of deaths due to COVID-19. While the Italian health system generally provides **good access to high-quality care**, the pandemic highlighted important structural weaknesses, including **years of low investment in the health workforce** and the health information infrastructure. The pandemic stimulated many innovative practices in Italy, such as the rollout of special units for continuity of care, which could be expanded to build a more resilient health system*

WHO's ranking (2000)

- Using five performance indicators The World Health Organization has analysed health systems in 191 member states

1. **France**
2. **Italy**
3. **San Marino**
4. **Andorra**
5. **Malta**
6. **Singapore**
7. **Spain**
8. **Oman**
9. **Austria**
10. **Japan**

Italy's National Health Service (NHS)

- Decentralised and regionally based
  - Central Government, Regions, Local Health Units
- Universal Coverage (UC)
- Provision of health care: public or regulated private
- Efficient (costs) and Effective (health outcomes)
- Recent policies for budget control (recovery plans) → disinvestment (mostly in personnel) and access problems

Italy's NHS: funding

- The funding of the NHS is established annually by the National Budget Law.
- The allocation of funds is essentially based on the age structure of the population.
- Sources of funding
  - Regional taxes (IRAP, "addizionale IRPEF")
  - Government budget [Share of VAT +] - regional redistribution
  - Revenues from local health units (cost-sharing)

Italy's NHS: funding

Tabella 1 Il finanziamento del Ssn. Anni 1980-2017 (percentuali e milioni di euro)

	1980	1990 (1)	2000	2010	2017
A. secondo le modalità:					
Contributi malattia	40,7	59,3	-	-	-
Irap	-	-	32,8	28,1	17,3
Addizionale Irpef	-	-	7,3	5,7	7,8
Iva (2)	-	-	-	49,0	55,9
Altre imposte e entrate	59,3	40,7	59,9	17,2	19,1
B. secondo le giurisdizioni:					
Stato	100,0	96,2	51,5	55,2	64,6
Regioni	0	1,4	45,0	42,0	32,8
Usl-Asl	0	2,3	3,6	2,7	2,5
C. secondo le fonti originarie (3):					
Famiglie	8,1	13,1	8,7	54,7	64,9
Imprese (4)	32,6	47,0	32,8	28,1	17,3
Famiglie e imprese (5)	59,3	39,9	58,5	17,2	17,8
TOTALE FINANZIAMENTO	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**
DISAVANZO	0,1	19,3	4,8	2,0	0,2

Source: https://www.lavoce.info/archives/58056/quarantanni-di-finanziamenti-al-sistema-sanitario/.

The Regional Health Systems (RHS)

Figura 31. Spesa sanitaria pubblica pro capite delle Regioni (euro), 2016

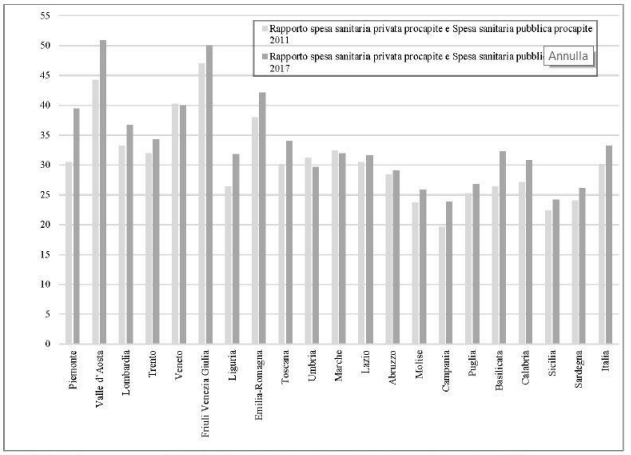
Fonte: The European House - Ambrosetti su dati Ragioneria Generale dello Stato, 2017

The Regional Health Systems (RHS)

Figura 32. Spesa sanitaria privata pro capite delle Regioni (euro), 2016

Fonte: The European House - Ambrosetti su dati Istat, 2017

Grafico 1 - *Rapporto spesa sanitaria privata pro capite e spesa sanitaria pubblica pro capite - Anni 2011, 2017*



Fonte dei dati: Istat. Spesa per consumi finali delle famiglie. Demografia in cifre per la popolazione. Anno 2019.

Italy's NHS: a bit of history

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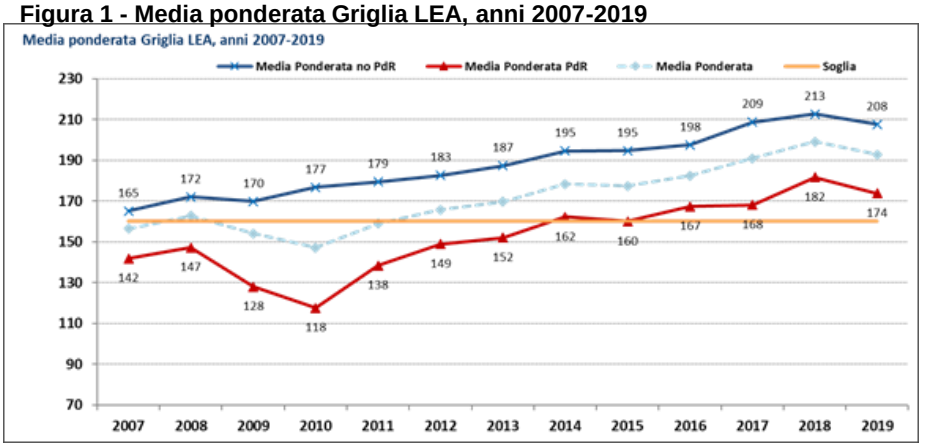
- Italy's NHS is made up of 19 regional health services (+ the two autonomous provinces of Trento and Bolzano).
- Established in 1978, from a Bismarck model to a tax-founded and universal coverage system of the Beveridge type.
- The constitutional reform of 2001 concluded a phase of reforms (1995-2001) aiming at curbing spending growth, eliminating the deficits, and addressing regional disparities in terms of health and access to healthcare. These reforms acted by changing incentives
  - Regions' incentives -fiscal decentralization- and hospitals' incentives –DRG
- Since 2007, **recovery plans**
- Since 2015, in agreement with the Ministry of Health, Lombardy has experimented a new and controversial health model, which has been highly criticized during the pandemic.

Recovery plans

- To foster financial accountability, financial agreements between the Ministry of Health and the Regions.
- Regions in fiscal imbalance had to elaborate recovery plans with the objective of **reducing expenditures,** while **mantaining health care services**
- In some cases the Region has been put under a Special Government Commissioner
- The two key dimensions for monitoring the implementation of the Recovery Plans are compliance with
  - "Maintenance of the provision of essential levels of care (LEA)" and
  - Regional deficit reduction.

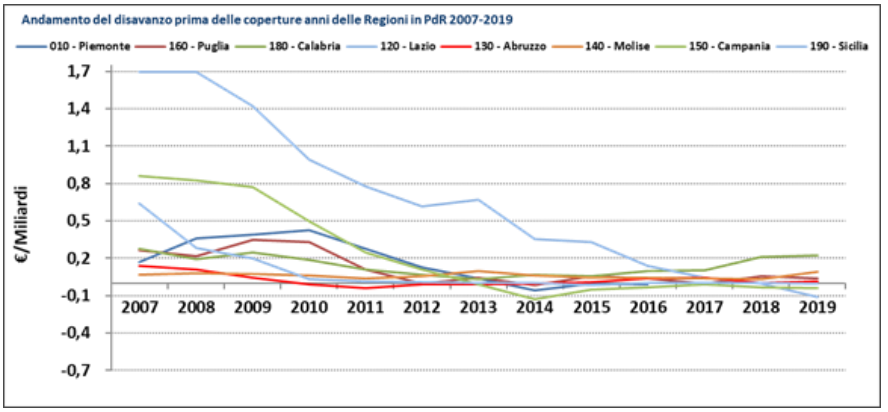
→Deficits have been almost entirely wiped out and Levels of care have been maintained (or ameliorated)

Figura 1 - Media ponderata Griglia LEA, anni 2007-2019



https://www.salute.gov.it/portale/pianiRientro/dettaglioContenutiPianiRientro.jsp?area=pianiRientro&id=5023&lingua=italiano&menu=vu

Figura 2 - Andamento del disavanzo prima delle coperture nelle Regioni in Pd



https://www.salute.gov.it/portale/pianiRientro/dettaglioContenutiPianiRientro.jsp?area=pianiRientro&id=5023&lingua=italiano&menu=vu

Recovery plans

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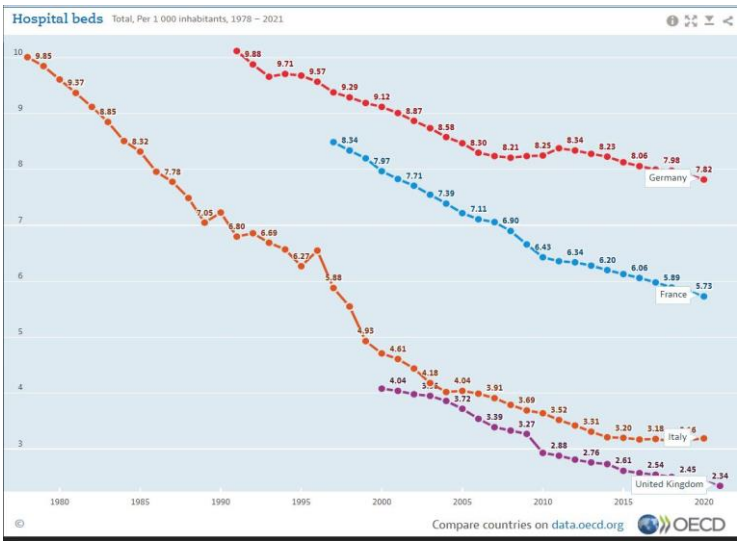
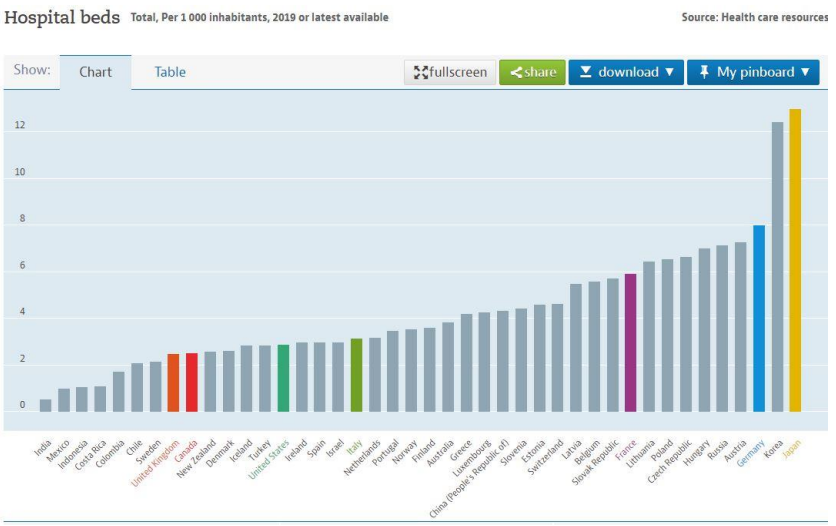
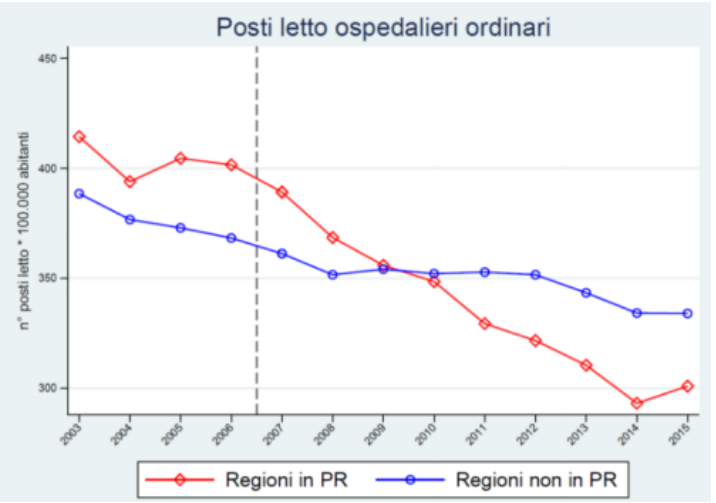
- The reforms aiming at curbing spending growth and at eliminating the deficits have led to the reduction of hospital beds and health personnel, especially in the Regions subject to recovery plan
- No turn-over → reduction of healthcare personnel
- Reorganization of hospitals → reduction in hospital beds
- These plans have contributed to the decrease of health spending deficit in the interested Regions from 4.7 billion in 2006 to 274k in 2018.
- To these results have contributed increased local taxes and co-payments.*
- Note that the interested Regions have been those with already unsatisfactory performances

Supply: Hospitals

- The reduction in number of hospitals is a worldwide phenomenon due to diagnostic and surgical technology, new drugs, and the strengthening of local services.
  - Today, interventions that previously required hospitalization are carried out in day-hospital
- In Italy, in the decade 2007-2017, n. of hospital beds fell by 45,000 units, hospitalizations fell by 3.4 million and hospital days by 16.6 million.
- In the period 2016-2018, the number of ordinary beds per inhabitant remained stable at 3.1 places per thousand inhabitants.
- The regional data relating to hospital supply indicators continue to show a strong variability between the South and Center North of the country: the ordinary beds per thousand inhabitants vary from the lowest values in Calabria (2.5 per thousand) and Campania (2, 6 per thousand) to the highest in Emilia Romagna (3.7 per thousand) and in the Aosta Valley (3.6 per thousand).







Beraldo https://www.lavoce.info/archives/70485/pazienti-in-fuga-dalle-regio

2020						
posti letto in degenza ordinaria per 1.000 abitanti	per acuti	lungodegenza	riabilitazione	totale	posti letto in day hospital per 1.000 abitanti	totale
Italia	**2,55**	**0,14**	**0,42**	**3,1**	**Italia**	**0,34**
Piemonte	2,43	0,21	0,75	3,39	Piemonte	0,44
Valle d'Aosta	3,14	0,13	0,63	3,89	Valle d'Aosta	0,32
Liguria	2,7	0,18	0,44	3,31	Liguria	0,43
Lombardia	2,75	0,07	0,64	3,47	Lombardia	0,23
Trentino Alto Adige	2,62	0,29	0,5	3,41	Trentino Alto Adige	0,39
Autonoma Bolzano	2,78	0,22	0,38	3,39	Autonoma Bolzano	0,33
Autonoma Trento	2,46	0,36	0,61	3,43	Autonoma Trento	0,45
Veneto	2,74	0,14	0,37	3,25	Veneto	0,28
Friuli-Venezia Giulia	2,84	0,04	0,21	3,09	Friuli-Venezia Giulia	0,37
Emilia-Romagna	2,67	0,4	0,28	3,35	Emilia-Romagna	0,2
Toscana	2,48	0,05	0,25	2,78	Toscana	0,42
Umbria	2,8	0,06	0,4	3,26	Umbria	0,44
Marche	2,58	0,21	0,3	3,09	Marche	0,4
Lazio	2,48	0,13	0,48	3,08	Lazio	0,4
Abruzzo	2,53	0,11	0,38	3,02	Abruzzo	0,34
Molise	2,56	0,01	0,42	3	Molise	0,42
Campania	2,2	0,13	0,26	2,58	Campania	0,44
Puglia	2,57	0,05	0,32	2,93	Puglia	0,22
Basilicata	2,31	0,25	0,3	2,86	Basilicata	0,41
Calabria	2,15	0,15	0,35	2,64	Calabria	0,41
Sicilia	2,41	0,08	0,37	2,86	Sicilia	0,39
Sardegna	2,72	0,11	0,15	2,99	Sardegna	0,43

Source ISTAT

Supply: doctors and nurses

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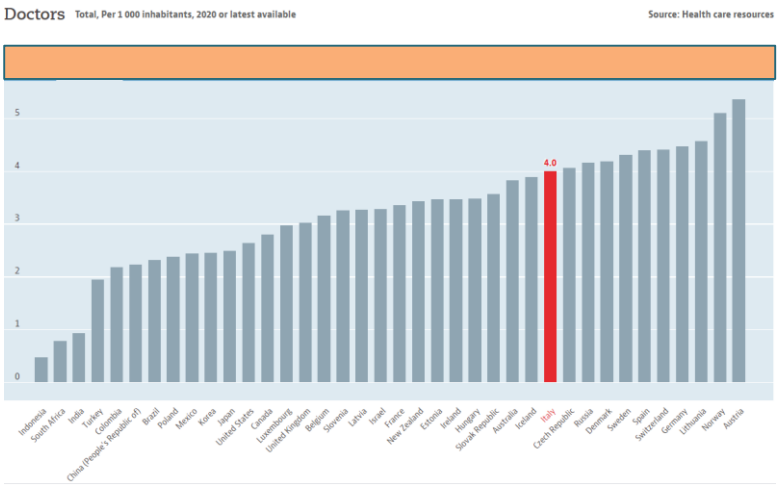
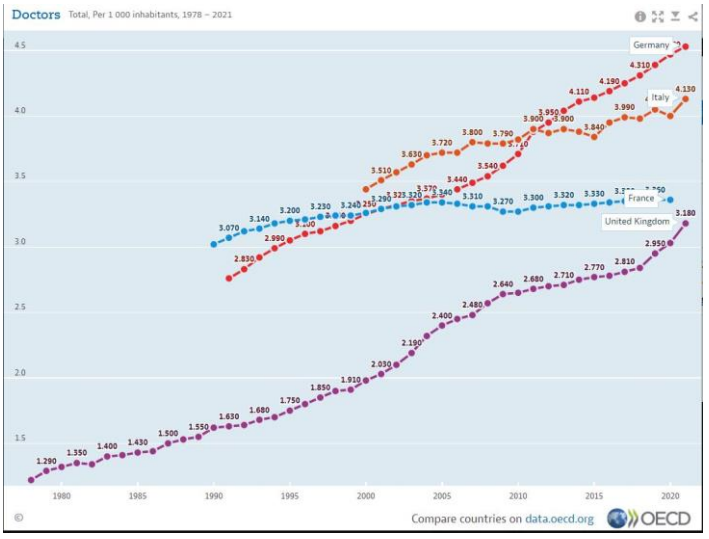
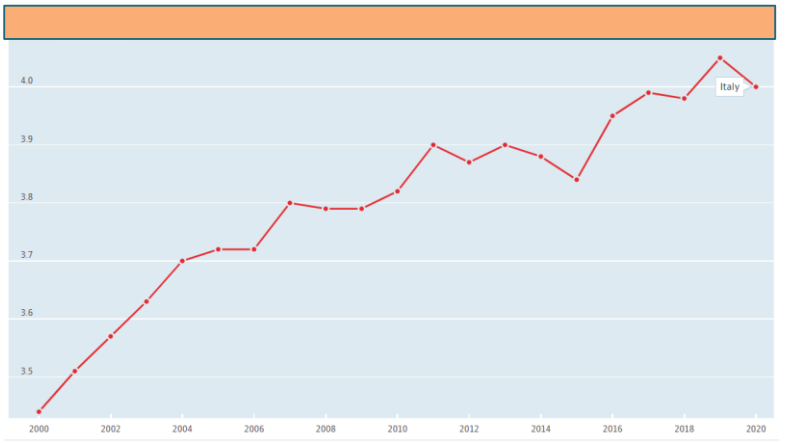
- Cost of personnel accounts for 1/3 of Italian health expenditure.
- In 2017, the NHS health care workers with permanent (long-term) contracts were lower than in 2008; overall there was a decrease of 6.2%
- The increase in short-term contracts only partially offset this decline
- The reduction in personnel is concentrated in Regions in recovery plans

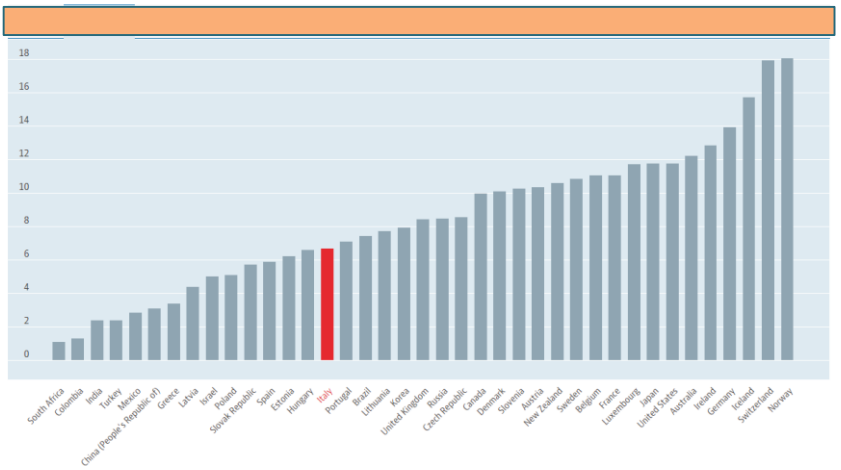

Doctors Total, Per 1 000 inhabitants, 2020 or latest available
Source: Health care resources
5
4
3
2
1
0
4.0
Indonesia
South Africa
India
Turkey
Colombia
China (People's Republic of)
Brazil
Poland
Mexico
Korea
Japan
United States
Canada
Luxembourg
United Kingdom
Belgium
Slovenia
Latvia
Israel
France
New Zealand
Estonia
Ireland
Hungary
Slovak Republic
Australia
Iceland
Italy
Czech Republic
Russia
Denmark
Sweden
Spain
Switzerland
Germany
Lithuania
Norway
Austria

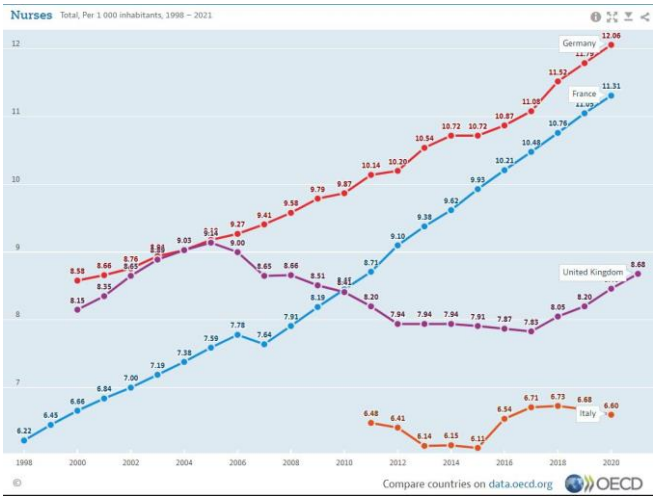

Doctors Total, Per 1 000 inhabitants, 1978 – 2021
Germany
Italy
France
United Kingdom
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1980
1985
1990
1995
2000
2005
2010
2015
2020
Compare countries on data.oecd.org
OECD

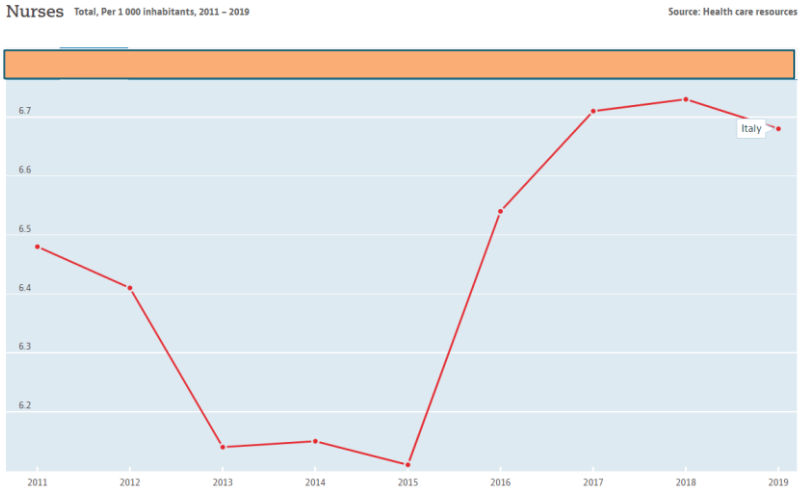
Doctors Total, Per 1 000 inhabitants, 2000 – 2020 Source: Health care resources

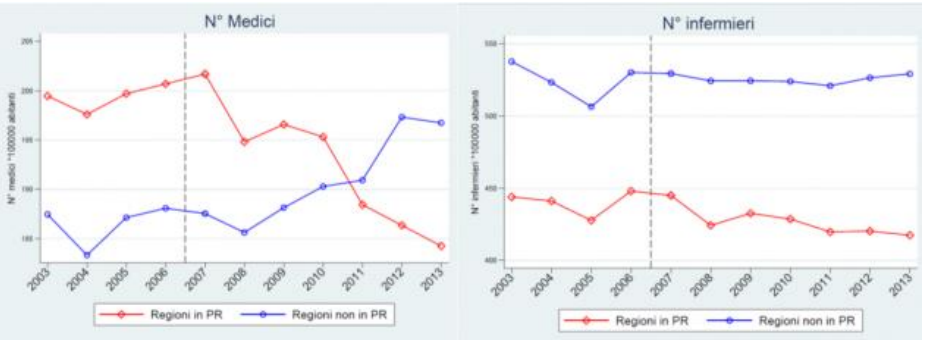


Nurses Total, Per 1 000 inhabitants, 2020 or latest available Source: Health care resources




Nurses
Total, Per 1 000 inhabitants, 1998 – 2021
Germany
France
United Kingdom
Italy
Compare countries on data.oecd.org
OECD


Nurses
Total, Per 1 000 inhabitants, 2011 – 2019
Source: Health care resources
Italy



Beraldo https://www.lavoce.info/archives/70485/pazienti-in-fuga-dalle-regioni-de

Source ISTAT

2020	personale sanitario per 10.000 abitanti			
Tipo di qualifica professionale	medici specialisti	medici generici	totale medici (generici e specialisti)	professioni sanitarie infermieristiche
Territorio				
Italia	31,5	8,5	40,0	62,8
Piemonte	28,5	8,2	36,7	64,0
Valle d'Aosta / Vallée d'Aoste	28,8	7,9	36,7	69,0
Liguria	36,8	8,7	45,5	79,5
Lombardia	29,9	7,0	36,8	54,7
Trentino Alto Adige	25,9	6,9	32,8	78,0
Autonoma Bolzano	27,2	6,1	33,3	80,2
Autonoma Trento	24,6	7,8	32,4	75,9
Veneto	26,9	7,7	34,6	65,7
Friuli-Venezia Giulia	31,2	8,2	39,3	70,2
Emilia-Romagna	34,3	8,4	42,7	64,7
Toscana	34,5	9,4	43,9	67,2
Umbria	34,2	10,2	44,3	71,6
Marche	28,9	8,7	37,7	64,8
Lazio	38,0	8,8	46,8	67,2
Abruzzo	32,1	10,4	42,5	68,2
Molise	29,5	11,2	40,7	78,8
Campania	30,3	8,0	38,2	55,5
Puglia	28,9	9,2	38,0	66,0
Basilicata	23,8	10,2	34,0	70,7
Calabria	28,6	10,0	38,6	54,9
Sicilia	33,7	9,7	43,4	58,5
Sardegna	37,7	9,8	47,5	60,7

Satisfaction

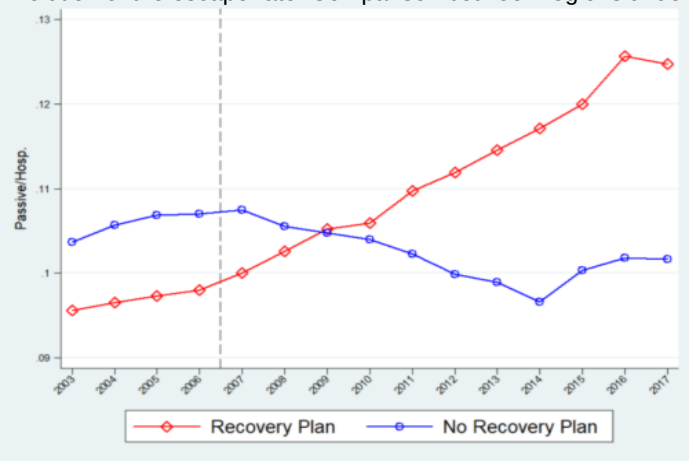
- Italians seem on average ("very or quite") satisfied with the services offered by hospitalization, particularly medical assistance (92%) and nursing (89%), less so for food (71%) and sanitation (82%).
- Data on satisfaction with hospital care highlight important regional disparities.

Source ISTAT

2018	per 100 persone con le stesse caratteristiche persone con almeno un ricovero nei tre mesi precedenti l'intervista per soddisfazione per vari aspetti del ricovero			
	assistenza medica	assistenza infermieristica	vitto	servizi igienici
	molto e abbastanza	molto e abbastanza	molto e abbastanza	molto e abbastanza
Italia	**91,7**	**89**	**70,9**	**82,1**
Piemonte	93,9	95,5	74,3	85,5
Valle d'Aosta	97	97	73,2	95,8
Liguria	94,3	90,8	78,5	87,6
Lombardia	94,7	92,6	77,1	89,2
Trentino Alto Adige	93,6	95,7	89,1	90,3
Autonoma Bolzano	91	94,4	91,7	89,3
Autonoma Trento	96,9	97,3	85,8	91,5
Veneto	95	89,5	81,6	92,5
Friuli-Venezia Giulia	90,8	85,9	65,5	82
Emilia-Romagna	94,1	92,6	76,1	92,4
Toscana	94,3	95,8	49,1	79,8
Umbria	88,7	85,5	73,2	89,5
Marche	84,6	94,3	71,1	83
Lazio	93,8	90,5	68,8	87
Abruzzo	91,1	88,2	71,1	72,6
Molise	87,5	89,7	75,1	81,4
Campania	86,2	82,1	67,5	68,4
Puglia	85,3	85,3	62,5	74,1
Basilicata	81,1	78	61,5	63,4
Calabria	76,1	64,8	56,5	63,1
Sicilia	97,4	83,4	72,9	69,3
Sardegna	84,8	85,9	66	80

Source ISTAT

Figure 2. Evolution of the escape rate: Comparison between regions under RP and region



Beraldo et al 2020. "Do Harder Local Budget Constraints Affect Patient Mobility?," CSEF Working Papers 580, University of Naple

Health tourism (Deloitte, 2021)

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- A third of Italians "travelled" in the last three years, for health reasons (major hospital interventions, hospitalizations, specialist visits, instrumental diagnosis)
  - 72% to other Italian Regions,
  - 12% to Europe,
  - 16% to the rest of the world
- Reasons
  - Receive treatment in a specific facility / specific doctor
  - Have a better quality of service
  - Because the waiting lists in the Region were too long

Reasons for health tourism [Deloitte 2021]

Health tourism [Gimbe]

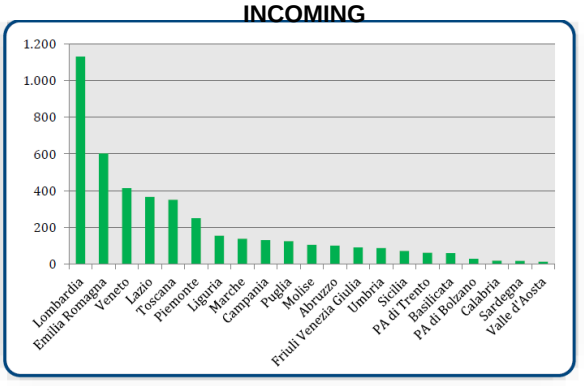

Figura 2. Crediti per mobilità sanitaria attiva: anno 2018 (dati in milioni di €)

Health tourism [Gimbe]

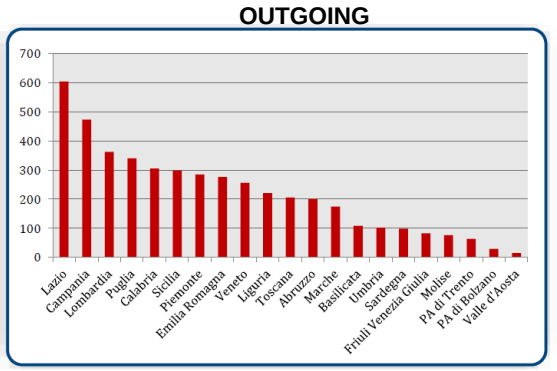

Figura 3. Debiti per mobilità sanitaria passiva: anno 2018 (dati in milioni di €)

Health tourism [Gimbe]

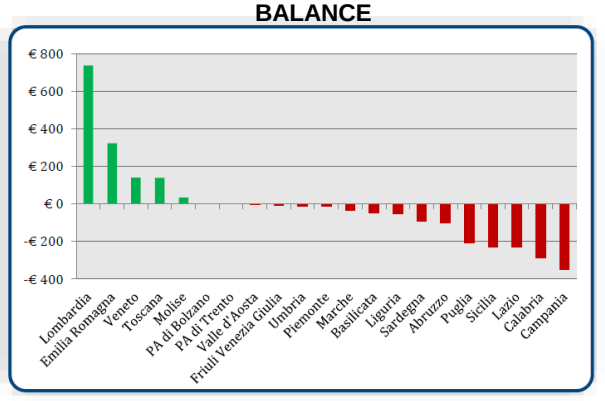

Figura 4. Saldo della mobilità sanitaria: anno 2018 (dati in milioni di €)

Cost for patients «travelling» [Deloitte 2021]

Health tourism - costs

- Low satisfaction leads to outgoing for health reasons for those who have the economic resources to do so.
- Travel costs + economic hardship → inequality in the effective possibility of accessing a fundamental right enshrined in the constitution.
- If the cost of hospitalization were equal to the amount paid by the escape Region to that attraction, there would be a saving in fixed costs (data are missing).
- However, alongside the costs and benefits for the NHS, it is necessary to take into account the costs incurred by individuals for moving. Those who cannot afford these expenses and give up on healthcare treatments (data)

Italy's NHS: open questions

- Regional disparities in addition to socio-economic disparities.
- Access
- Lack of personnel
- Insufficient expansion of local care services
- Demand shift to the private sector
  - tax breaks,
  - opting out and quality of the NHS
- Need for central HTA
- Technical progress and telemedicine

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