SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA

THE EMILIA-ROMAGNA REGIONAL HEALTH SERVICE

FACILITIES, EXPENDITURE, ACTIVITIES AS OF 31.12.2011
PROGRAMS, AGREEMENTS AND ORGANIZATIONAL MODELS

Regione Emilia-Romagna

CONTENTS

The Emilia-Romagna Regional Health Service: results as of 31st December 2011 and commitments

"Notwithstanding the funding shortening, cost increase, the many uncertainties at national level, in 2011 Emilia-Romagna Region can breakeven", the Health Policies Councillor Carlo Lusenti announced during the Council Commission last April while presenting 2011 pre-final balance and focusing on resources needed to support the Health Service in the current heavy crisis period.

Results as of 31st December 2011 are on the whole positive.

The financial balance is even, in spite of funding reduction and the complete cancellation of the National Fund for non self-sufficient people (the Region allocated 31 million Euros of its resources to cover it).

Also the balance on services provided to citizens is positive; services are based on single people centrality and their health needs, on integration and interdisciplinarity to better guarantee support and care continuity (as indicated in the resolution of the Emilia-Romagna Regional Government no. 732/2011 on planning).

For 2012 and future years effects of measures adopted by the two last national Governments (Berlusconi and Monti) (the "spending review" law no. 135 of August 2012, the decree on healthcare reorganization currently under debate among Regions and in the Parliament) will need to be considered.

Moreover, in 2012 Emilia-Romagna was also heavily hit by the earthquake in the provinces of Modena, Ferrara, Bologna and Reggio Emilia. The strong tremors in May caused victims, injured people, buildings destruction, including health facilities in Carpi, Mirandola, Finale Emilia, Bondeno, University Hospital Trust in Modena. All Health Service personnel did all they could to offer help and healthcare; the Region adopted some measures, for example ticket exemption for people in involved areas, and is working for reconstruction, in collaboration with the national and local levels. All health facilities will be restored by the end of 2012, but wounds will require long time to be healed.

Results as of 31st December 2011

Results are widely illustrated in the following pages; here some synthetic hints are proposed.

The resident population increased in 2011: +26,807 people in comparison to 2010, 4,459,246 in total. This is due to the increase of foreigners who have come to live in Emilia-Romagna, to the growth of the elderly population for a longer life expectancy, to an increase in births.

Total expenditure was 8.514 billion Euros (8.431 in 2010), with per capita expenditure of 1,909 Euros (1,902 in 2010). Emilia-Romagna demonstrated a good capacity of expenditure management, as shown by the per capita expenditure in comparison to other Regions and to the national average.

Payment periods for suppliers of goods and services are still better than the national ones, even if a little increased in comparison to 2010. Expenditure for the Regional Fund for non self-sufficient people continued to be significant at 459.1 million Euros, with a little decrease with respect to 468.1 million Euros in 2010 (but in 2011 the Region had to counterbalance the cancellation of the National Fund with 31 million Euros).

Pharmaceutical expenditure decreased by 3.7%. Community pharmaceutical expenditure significantly decreased: -6.2% with respect to 2010. Per capita pharmaceutical expenditure continued to be lower than the national one: 170.2 Euros compared to 204.3 Euros. Expenditure for generic medicines has been gradually increasing year after year, rising from 15% in 2005 to 41% of Regional Health Service-funded expenditure in 2011.

Investments in social-health and healthcare facilities amounted to 2.464 billion Euros (1991-2011 period). The number of public and accredited private beds was 20,493, 3.72 per 1,000 inhabitants for acute cases, 0.88 for long-stay and rehabilitation. The attraction index from outside the region (i.e. people from other regions coming to Emilia-Romagna to be treated) was 14% (13.8% in 2010).

Waiting times for planned operations in cardiology and vascular departments were in line with national targets; waiting times for surgical interventions in oncology departments (longer times may be necessary for specific therapies between diagnosis and surgery) and for hip replacement (the high attraction index of the Rizzoli Research Hospital in Bologna needs to be considered) have not yet met targets.

Visits to Emergency Rooms have been substantial: 1,864,513. Specialist outpatient services (tests and examinations) decreased to 75,383,118 (76,008,277 in 2010).

In Family Advisory Centres most activity was delivered during pregnancy (estimated 33.9%), for cancer screening programs (estimated 30.3%), for gynaecological care (estimated 19.2%).

People receiving care at home were 97,037 (97,354 in 2010); families benefiting from care allowances to take care of sick, disabled, or non self-sufficient family members at home were 19,315 (23,175 in 2010): the decrease is due to new priority criteria for accessing contributes. Expenditures for care allowances decreased as well: 55 million Euros compared to 60.7 in 2010. Among elderly people receiving care allowances, the most represented age group is over 85 (46.3%), among disabled the 45-49 age group (39%).

There were 29,433 (28,295 in 2010) residential and semi-residential places for the elderly, the disabled and individual with mental health conditions or addictions. Dedicated residential facilities for the elderly (74.8% of the total) accommodated 25,745 people; semi-residential facilities (36.5%) accommodated 4,754 elderly. The hospice network is increasing: 20 facilities with 248 beds accommodated 4,105 people (in 2010, 241 beds and 3,973 hosted people).

Mental health services confirmed also in 2011 an increase in the number of adult Patients: 76,015 (74,406 in 2010); also the number of minor Patients treated at Neuropsychiatric Services for children and adolescents increased: 41,175 in 2011; 30,783 individuals with drug or alcohol addiction were treated at Substance Abuse Sevices (SerT), a figure basically stable over years.
Senile Dementia Services registered 18,284 new users (18,017 in 2010) and 69,318 examinations were carried out: both numbers are constantly increasing.
Donations and transplants of organs, tissues, cells, blood and cord blood remained at good levels: the number of blood units collected increased (254,000 units, +0.2% compared to 2010), as well as the number of donors.
The three screening programs for the prevention and early diagnosis of breast, cervical and colorectal cancer continued to register good adhesion rates and good results, as confirmed also by the national PASSI research.
With regard to childhood and adolescent vaccination programs, in 2011 the slight decrease trend was confirmed, even though the national target of 95% was exceeded. The participation in the regional program for influenza vaccination was stable for people over 65 years (63.6% - 63.3% in 2010); it decreased for adults and children with chronic conditions (11,432 - 13,265 in 2010). Results for vaccination against human papilloma virus (HPV) are improving: 73.9% females born in 1997 were vaccinated (73% in 2010); 72.7% of those born in 1998 (66.4% in 2010); 66.8% of those born in 1999.
Work related accidents reported to INAIL (National Insurance Institute for Occupational Accidents) decreased: 99,713 compared to 106,077 in 2010; also work-related deaths decreased: 84 compared to 91 in 2010. It is however necessary to consider the general economic crisis and the decrease in workers number. Among health workers with INAIL insurance, work accidents were 90,638 (95,020 in 2010); 94.7% of them were judged fit for work (93.6% in 2010).
Controls for food safety found a slightly increased number of irregular production plants: 6,203 in 2011, 5,472 in 2010. The salmonella control plan in poultry farms confirmed a low level of circulation of the most dangerous serotypes for human. Controls on environmental pollutants and unauthorized substances in farms and slaughterhouses registered an increase in the number of inspected plants (from 10,208 to 11,244), while irregularities remained stable at 0.3%.
Telephone and online services for information, bookings, payments, counseling are constantly increasing: the tool free number 800 033 033 registered 386,818 calls in 2011, more than tripled; the Saluter web portal counted 2,343,952 visits, more than doubled compared to 2010. It has to be noted that in September-November 2011 the changes on tickets established at national level determined an upswing of accesses to seek information.

Programs, agreements, organizational models

The second part of the document presents the main programs, agreements and organizational models adopted in Emilia-Romagna, that are now briefly described.
The new Sant'Anna Hospital (University Hospital Trust of Ferrara) in Cona is now fully working. The Romagna Institute for Cancer research and Care (IRST) in Meldola was recognized as Research Hospital for advances oncological therapies.
A new system for continuing medical education (ECM) was implemented: credit awarding is now dependent on the development of specific competence.
The new Region-University Research Program to fund innovative research project, research projects for clinical governance and training projects was started.
In nine Health Trusts an experimentation on "hospitals for care intensity" is undergoing, a new organizational model that arranges hospitalizations according to Patients' level of gravity and consequently to care levels needed.
Among the programs for prevention and control of infectious risk, good results were reached by the "Hand Hygiene" program.
International literature will be soon searched to study how other Countries have treated the waiting lists issue.
The 2012 Program for the Regional Fund for non self-sufficient people is going on. The regional plan to eradicate measles and inborn rubella by 2015 was adopted.
The program to promote and prescribe physical activity as medicine was started.
The Home for health promotion and protection in prison is being realized, following the model of the Healthcare Home.
A new Program for young people with autistic problems was activated, as well as a program to promote healthy dietary habits in school.
Two programs have been implemented to improve communication with Patients and their families: health literacy and empathetic communication. A focus on elderly people's health is also in the Silver PASSI research.
The new agreement between Emilia-Romagna Region and the Private Hospital Association (AIOP), and the agreement between the Region, the Italian National Olympic Committee, the Italian Paralympic Committee and other bodies for sport promotion were signed.
The network for paediatric rare diseases and the network for hereditary metabolic diseases are now working as hub and spoke networks for high specialty hospital care.
The implementation of Healthcare Homes is going on: in June 2011 there were 49. The network of oncology pharmacies is fully implemented; the SOLE network (online healthcare) – which allows easier communication among healthcare workers, simplifies public access to services, enables people to have their own Patient summary – is nearly completed.
Healthcare, social-health and social services continue to be accredited. Some laboratories for community participation will soon be constituted.

The level of funding for the Regional Health Service in 2012 (resolution no. 653/2012) is 7,999.081 million Euros: 7,849.081 coming from the National Health Fund (but not yet confirmed) and 150 millions from regional resources. The Health Trusts' own revenues and the positive balance by interregional healthcare mobility contribute to the total healthcare expenditure coverage. Effects of the national measures will have to be considered for 2012 programming.

Population

The resident population increased also in 2011: there were 4,459,246 resident individuals as of 31st December 2011, +26,807 compared to 31st December 2010 (4,432,439); there were more women (2,295,039) than men (2,164,207). This trend has been underway since the second half of the 1990s and is related to three factors: the continually increasing number of new citizens (foreigners coming to live in Emilia-Romagna), which reached 530,015 individuals as of 31st December 2011 (500,585 in 2010); the increase in the over 65, that exceeded a million (1,004,450 at 31st December 2011 - 986,845 in 2010); births, that in 2011 amounted to 40,448 (41,817 in 2010).

New citizens

As of 31st December 2011, 530,015 foreign residents live in Emilia-Romagna, 11.9% of total population (500,585 in 2010 - 11.3% of the population). Women prevail (274,174 - 51.7%) on men (255,841 - 48.3%): from 2001 to 2011 they have become more and more numerous, until they reached the majority in 2008 (50.1%) and have continued to increase. The female presence should be related to care to elderly people, often entrusted to female family assistants from other Countries.
Growth in Emilia-Romagna was much greater than at a national level, where new resident citizens amounted to 7.5% of the population as of 31st December 2010 *(latest figure available)*.
Analysis of the presence of foreigners in the Local Health Trusts confirms a situation already registered in recent years: the LHT with the highest number of foreigners was Piacenza (14.1% of the population, 13.4% in 2010), followed by Reggio Emilia (13.5% - 13% in 2010), Modena (13.4% - 12.7% in 2010), Parma (13.1% - 12.5% in 2010); then Ravenna, Forlì, Bologna, Cesena, Imola, and finally Ferrara with the lowest number of resident foreigners (8.1% - 7.6% in 2010). The top five countries most represented remain the same: Morocco, Romania, Albania, Moldova, Ukraine.

New borns

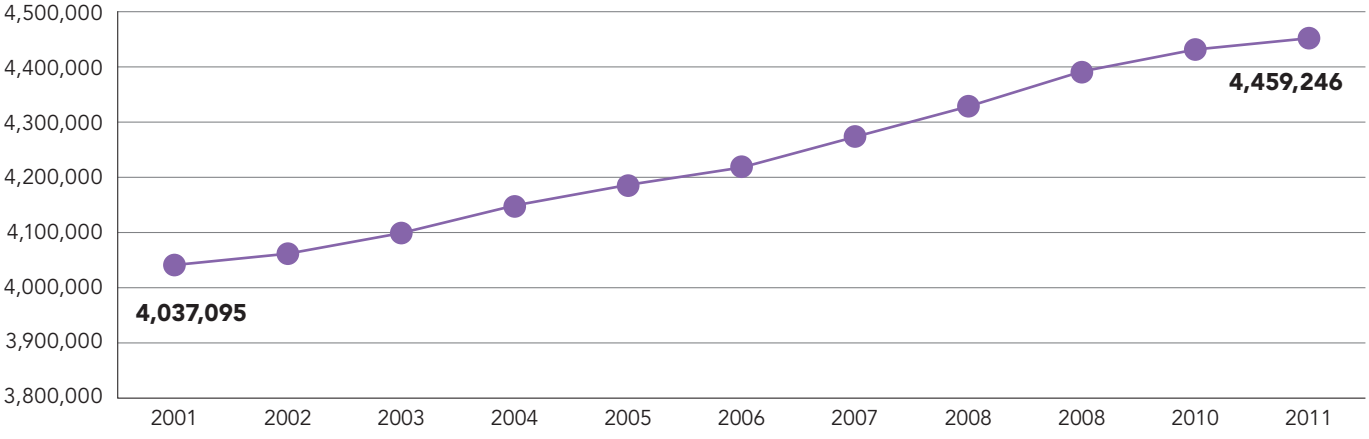
The precise datum of babies born in 2011 is not yet available from ISTAT (National Institute for Statistics), probably as a consequence of the elaboration times of the population national census held in 2011.
From the 12 monthly demographic reports by ISTAT, in 2011 in Emilia-Romagna 40,448 babies were born (41,817 in 2010). The regional birth rate was 9.4 per 1,000 inhabitants, at national level the figure was 9.1 (estimated data from ISTAT). The number of babies born to foreign mothers is significant: 29.8% of total births in Emilia-Romagna (2010 final datum: 29.3%).

The elderly

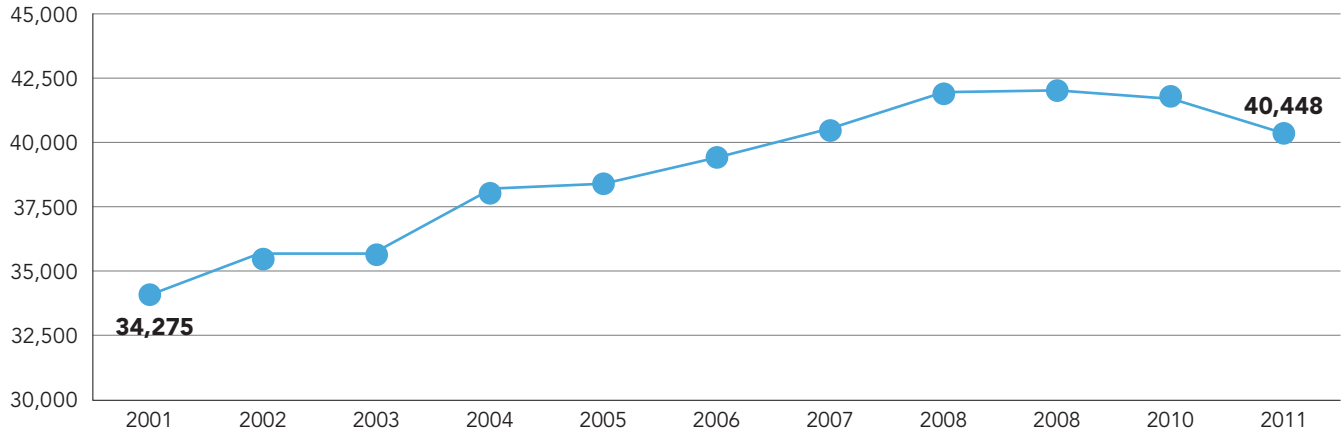
In 2011 people aged over 65 years exceeded one million: 1,004,450, 22.5% of the population (986,845 as of 31st December 2010, 22.3% of the population). The figure is higher than the national one (20.3% as of 31st December 2010, *latest figure available*), and has been continually rising for more than two decades.
The numbers of people aged over 75 (522,725 - 11.7% of the resident population; 516,944 in 2010, 11.7%) and over 80 (320,913 - 7.2% of the resident population; 314,652 in 2010, 7.1%) are significant; two out of three are women. Individuals aged over 85 numbered 159,083, 3.6% of the population (154,365 in 2010, 3.5%).
As in past years, the Local Health Trust with the greatest number of people aged over 65 is Ferrara, with 25.8% (25.3% in 2010), followed by Piacenza (24% - 23.8% in 2010), Ravenna and Bologna (both 23.8%; in 2010 Ravenna 23.6%, Bologna 23.5%), Forlì (23.6% - 23.4% in 2010), Imola (22.5% as in 2010), Parma (22.4% - 22.2% in 2010), Cesena (21.2% - 21% in 2010), Modena (21% - 20.7% in 2010), Rimini (20.9% - 20.6% in 2010) and finally Reggio Emilia (19.8% - 19.6% in 2010).

For more information:
http://www.regione.emilia-romagna.it/statistica

Resident population in Emilia-Romagna - Period 2001-2011

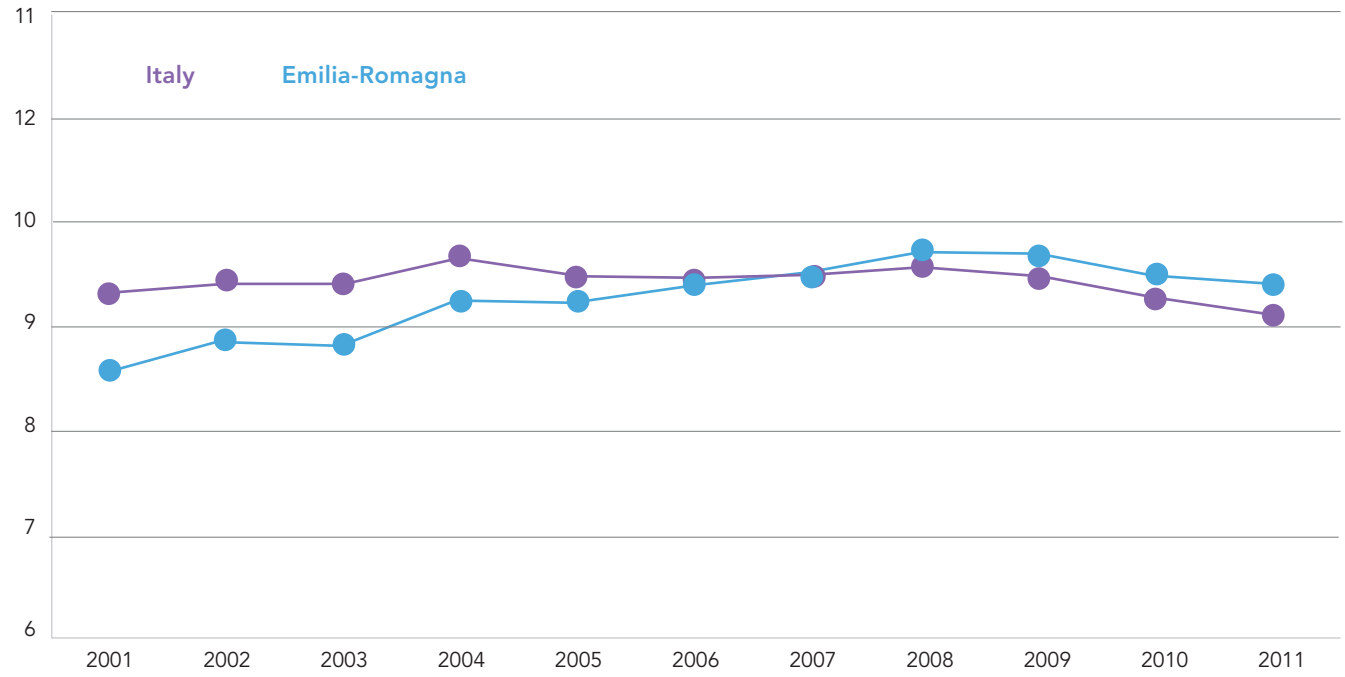


Residents born in Emilia-Romagna - Period 2001-2011 (*)



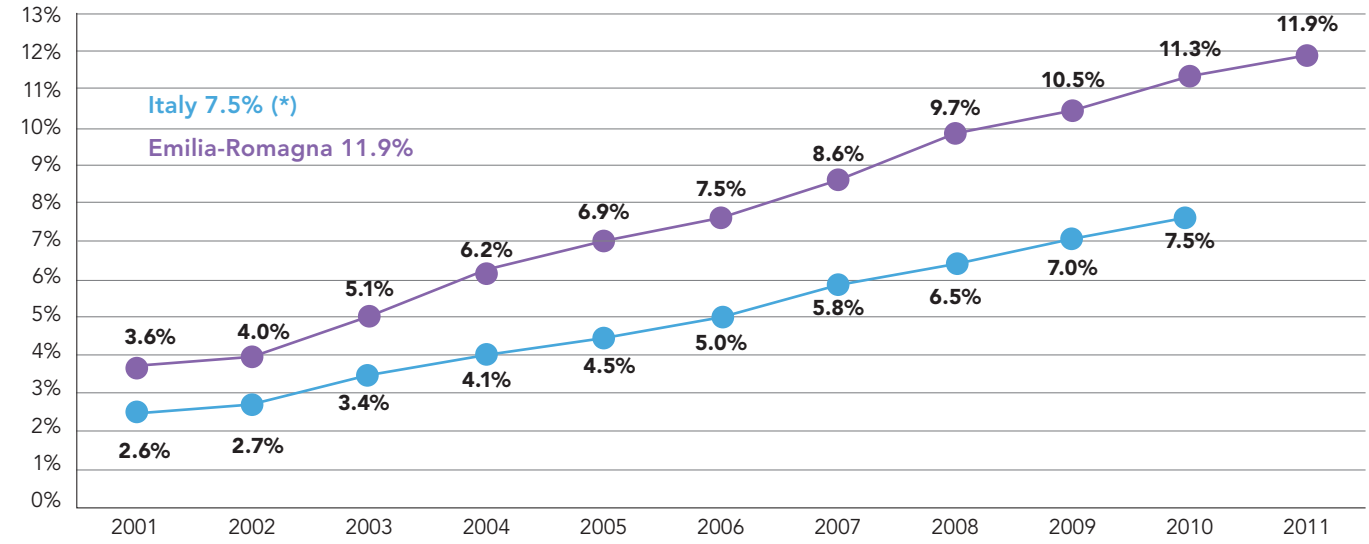
(*) *Source: ISTAT. The 2011 annual demographic balance is not yet available; the 2011 figure is inferred from the ISTAT monthly reports and is not to be considered final.*

Birth rate per 1,000 inhabitants Emilia-Romagna and Italy - Period 2001-2011 (*)



(*) *Source: ISTAT (demographic indicators). The 2011 figure is estimated.*

Percentage of foreign population with respect to resident population in Emilia-Romagna and Italy - Period 2001-2011

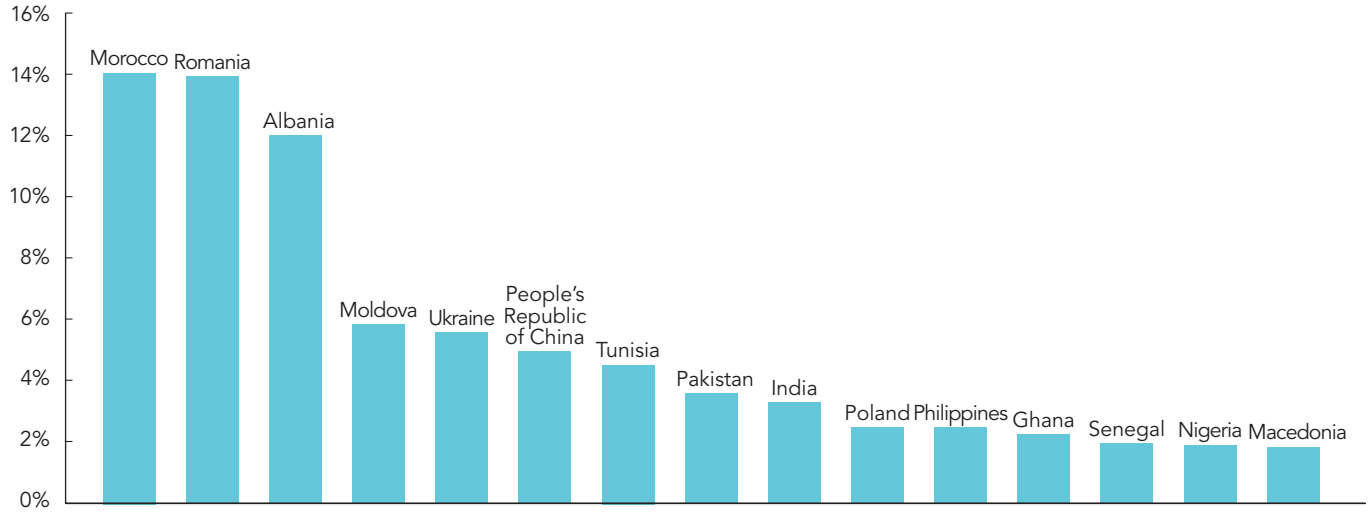


(*) Latest figure available as of 31/12/2010.

Resident foreign population by Local Health Trust of residence - Year 2011

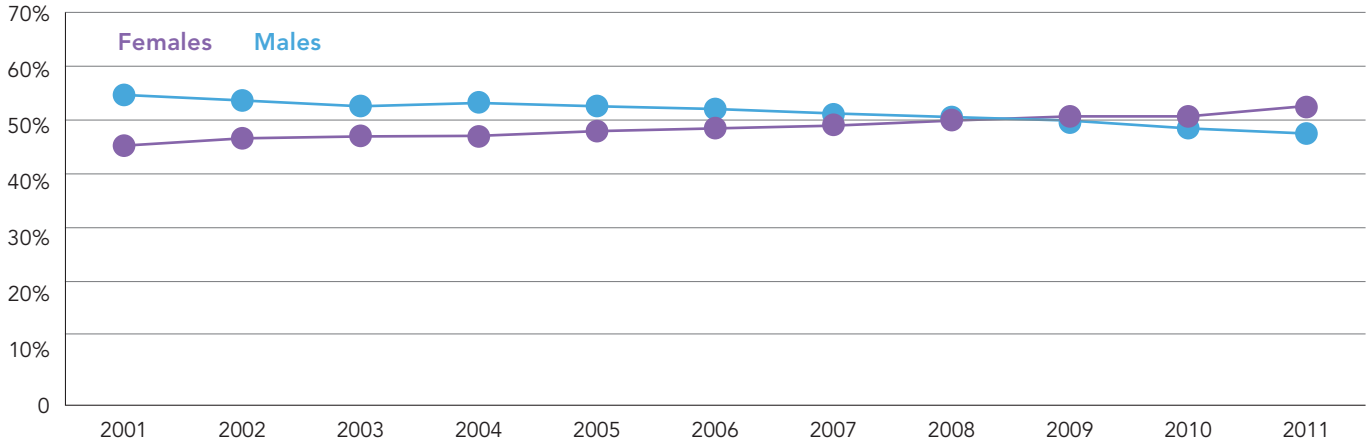
Local Health Trust	Foreign male residents	Foreign female residents	Total no. of foreign residents	Total population	% of foreigners out of total no. of residents
Local Health Trust of Piacenza	20,588	20,493	41,081	291,302	14.1%
Local Health Trust of Parma	28,249	29,984	58,233	445,283	13.1%
Local Health Trust of Reggio Emilia	35,884	36,458	72,342	534,014	13.5%
Local Health Trust of Modena	46,843	47,516	94,359	705,164	13.4%
Local Health Trust of Bologna	45,770	51,563	97,333	866,294	11.2%
Local Health Trust of Imola	5,810	6,555	12,365	132,637	9.3%
Local Health Trust of Ferrara	12,837	16,230	29,067	359,686	8.1%
Local Health Trust of Ravenna	22,637	23,527	46,164	394,464	11.7%
Local Health Trust of Forlì	10,846	11,172	22,018	188,710	11.7%
Local Health Trust of Cesena	10,713	11,439	22,152	209,622	10.6%
Local Health Trust of Rimini	15,664	19,237	34,901	332,070	10.5%
Total	**255,841**	**274,174**	**530,015**	**4,459,246**	**11.9%**

Resident foreign population by Country of birth (*) - Year 2011



(*) First 15 nationalities as percentage of total no. of foreign residents.

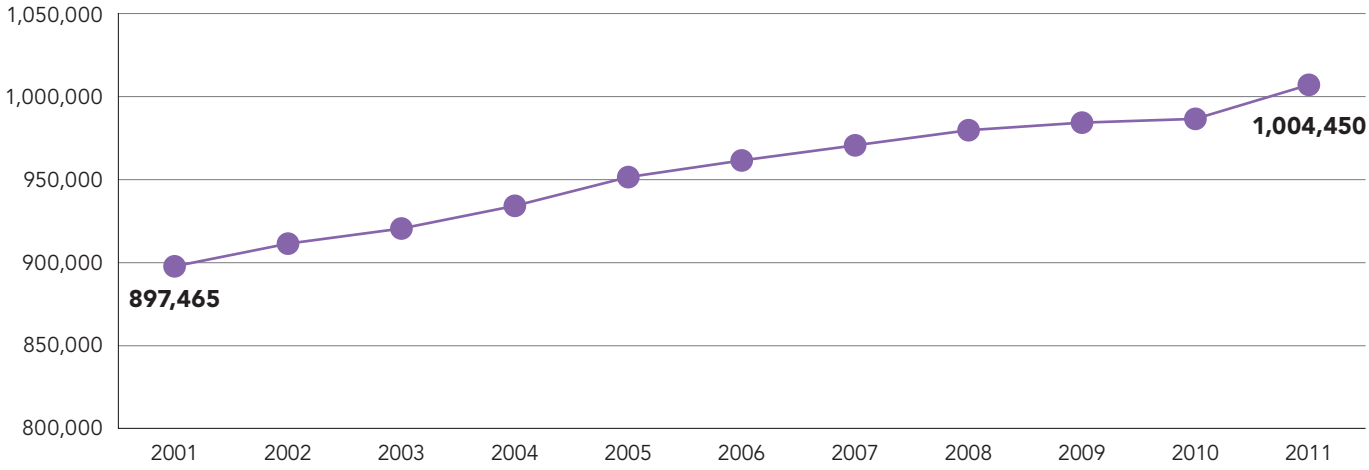
Resident foreign population by gender - Period 2001-2011



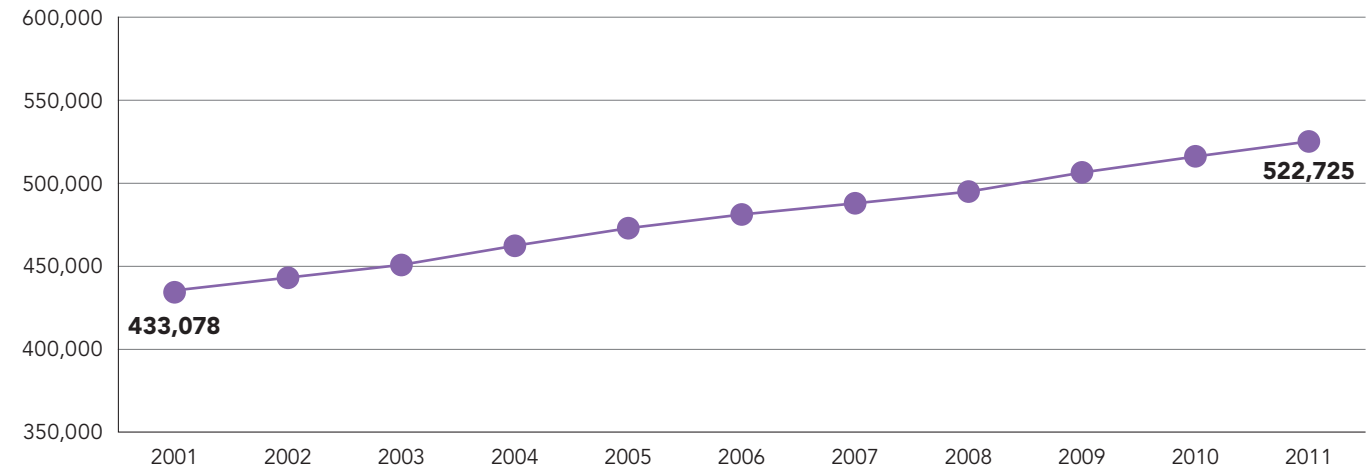
Resident elderly population by Local Health Trust of residence - Year 2011

Local Health Trust	Total population	Over 65	% over 65	Over 75	% over 75	Over 80	% over 80	90 and over	% 90 and over
Local Health Trust of Piacenza	291,302	69,805	24.0%	36,619	12.6%	22,639	7.8%	3,650	1.3%
Local Health Trust of Parma	445,283	99,802	22.4%	52,054	11.7%	32,457	7.3%	5,461	1.2%
Local Health Trust of Reggio Emilia	534,014	105,861	19.8%	54,911	10.3%	33,851	6.3%	5,484	1.0%
Local Health Trust of Modena	705,164	147,914	21.0%	76,252	10.8%	46,440	6.6%	7,635	1.1%
Local Health Trust of Bologna	866,294	206,129	23.8%	108,125	12.5%	67,105	7.7%	11,240	1.3%
Local Health Trust of Imola	132,637	29,825	22.5%	15,741	11.9%	9,613	7.2%	1,507	1.1%
Local Health Trust of Ferrara	359,686	92,648	25.8%	48,041	13.4%	28,694	8.0%	4,325	1.2%
Local Health Trust of Ravenna	394,464	93,994	23.8%	50,355	12.8%	30,905	7.8%	5,270	1.3%
Local Health Trust of Forlì	188,710	44,625	23.6%	23,530	12.5%	14,714	7.8%	2,484	1.3%
Local Health Trust of Cesena	209,622	44,500	21.2%	22,187	10.6%	13,265	6.3%	2,003	1.0%
Local Health Trust of Rimini	332,070	69,347	20.9%	34,910	10.5%	21,230	6.4%	3,359	1.0%
Total	**4,459,246**	**1,004,450**	**22.5%**	**522,725**	**11.7%**	**320,913**	**7.2%**	**52,418**	**1.2%**

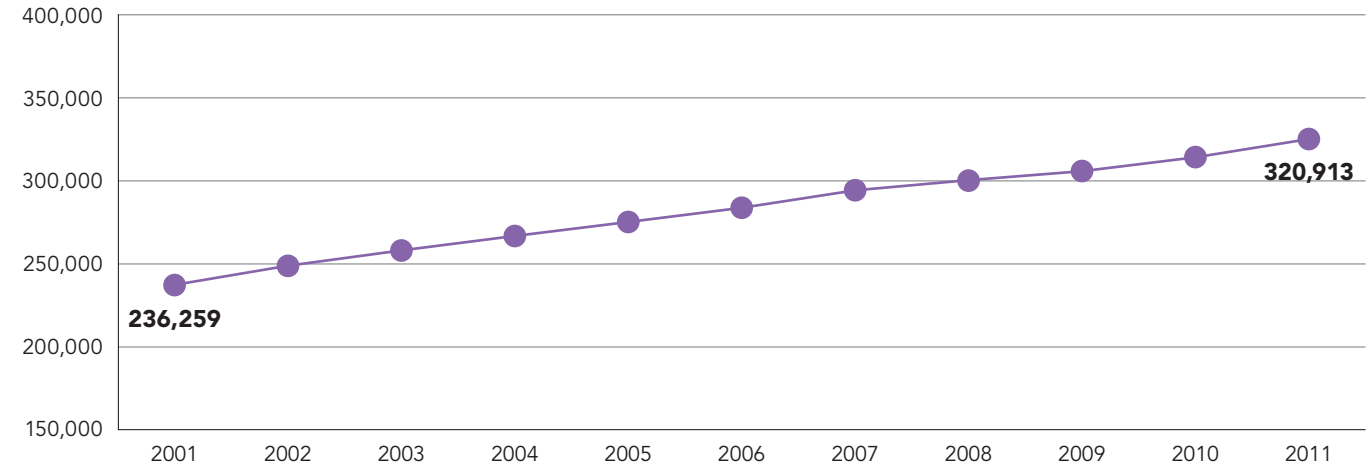
Resident elderly population aged over 65 - Period 2001-2011



Resident elderly population aged over 75 - Period 2001-2011



Resident elderly population aged over 80 - Period 2001-2011



Health Trusts, Research Hospitals, public hospital beds, employees, general practice physicians and paediatricians, Aree Vaste (Vast Areas)

The Regional Health Service of Emilia-Romagna comprises:

- 11 Local Health Trusts: Piacenza, Parma, Reggio Emilia, Modena, Bologna, Imola, Ferrara, Ravenna, Forlì, Cesena and Rimini. They usually cover the entire provincial area, with the exception of Bologna (Bologna LHT and Imola LHT) and Forlì-Cesena (Forlì LHT and Cesena LHT);
- 4 University Hospital Trusts: Parma (Maggiore Hospital), Modena (Policlinico Hospital), Bologna (S. Orsola-Malpighi Policlinico Hospital) and Ferrara (S. Anna Main Hospital);
- 1 Hospital Trust: Reggio Emilia Hospital Trust (Santa Maria Nuova Main Hospital);
- 4 Research Hospitals (IRCCS): the Rizzoli Orthopaedic Institute of Bologna, the Bologna Institute of Neurological Sciences (within Bologna Local Health Trust), the Reggio Emilia Institute of Advanced Technologies and Care Models in Oncology *(within the Reggio Emilia Hospital Trust), the Romagna Institute for Cancer research and Care in Meldola (since May 2012, therefore not counted in tables).*

Public hospital beds numbered 15,907, with 38 Health Districts. The employees in the Regional Health Service numbered 62,294 (62,527 in 2010); contracting general practice physicians were 3,144 (3,176 in 2010), contracting paediatricians were 615 (602 in 2010).

To rationalise expenditure and to optimise quality and efficiency of technical/logistics services and regional care functions, three Vast Areas were created by grouping Health Trusts: North Emilia, Central Emilia and Romagna.

Local Health Trusts: resident population, Health Districts, public beds, employees, general practice physicians and paediatricians - Year 2011

Local Health Trust	Population	% population by LHT	No. of Health Districts	No. of public beds (*)	Employees	General practice physicians	Paediatricians
Local Health Trust of Piacenza	291,302	6.5%	3	866	3,657	204	33
Local Health Trust of Parma	445,283	10.0%	4	413	2,639	300	59
Local Health Trust of Reggio Emilia	534,014	12.0%	6	755	4,123	334	87
Local Health Modena	705,164	15.8%	7	1,667	6,074	518	102
Local Health Trust of Bologna (including IRCCS Bologna Institute of Neurological Sciences)	866,294	19.4%	6	1,818	8,447	611	119
Local Health Trust of Imola	132,637	3.0%	1	565	1,781	97	21
Local Health Trust of Ferrara	359,686	8.1%	3	752	3,050	276	39
Local Health Trust of Ravenna	394,464	8.8%	3	1,178	4,949	282	50
Local Health Trust of Forlì	188,710	4.2%	1	614	2,579	138	26
Local Health Trust of Cesena	209,622	4.7%	2	604	2,835	147	32
Local Health Trust of Rimini	332,070	7.4%	2	981	4,269	237	47
Total no. at Local Health Trusts	**4,459,246**	**100.0%**	**38**	**10,213**	**44,403**	**3,144**	**615**

Hospital Trusts, University Hospital Trusts, Research Hospitals: beds and personnel - Year 2011

Hospital Trusts, University Hospital Trusts, Research Hospitals	No. of public beds (**)	Employees
University Hospital Trust of Parma	1,218	3,858
Hospital Trust of Reggio Emilia (including IRCCS Reggio Emilia Institute of Advanced Technologies and Care Models in Oncology)	923	2,795
University Hospital Trust of Modena	744	2,415
University Hospital Trust of Bologna	1,622	5,039
University Hospital Trust of Ferrara	860	2,571
Research Hospital Rizzoli Orthopaedic Institute of Bologna	327	1,213
Total no. at Hospital Trusts, University Hospital Trusts, Research Hospitals	**5,694**	**17,891**
Totale regionale	**15,907**	**62,294**

(*) Private hospital beds are not included in the tables.
(**) The Romagna Institute for Cancer research and Care in Meldola is not included in the table as it acquired the status of Research Hospital in May 2012 and data refer to 31/12/2011.

Regional Health Service employees - Period 2010-2011

	Anno 2010	Anno 2011
Physicians	9,121	9,140
Veterinarians	517	506
Other health professionals	1,229	1,263
Technical and administrative professionals	573	575
Nursing personnel	26,752	26,587
Laboratory and diagnostic personnel	3,474	3,409
Prevention personnel	907	931
Rehabilitation personnel	2,374	2,360
Social workers	421	401
Technical personnel	5,045	4,981
Assisting personnel (*)	204	181
Social care personnel	5,561	5,663
Specialized auxiliary personnel	291	298
Administrative personnel	6,055	5,994
Religious personnel	2	5
Total	**62,527**	**62,294**

(*) Dying out function.

Vast Areas

Vast Area	Population	>= 65 years population	% >= 65 years population
Vast Area of North Emilia	**1,975,763**	**423,382**	**21.4%**
Health Trusts of Piacenza, Parma, Reggio Emilia, Modena			
Vast Area of Central Emilia	**1,358,617**	**328,602**	**24.2%**
Health Trusts of Bologna, Imola, Ferrara, Rizzoli Research Hospital			
Vast Area of Romagna	**1,124,866**	**252,466**	**22.4%**
Health Trusts of Ravenna, Forlì, Cesena, Rimini			
Total	**4,459,246**	**1,004,450**	**22.5%**

Expenditure by levels and functions of healthcare for resident population, per capita expenditure

Total expenditure of the Region Health Service of Emilia-Romagna in 2011 was 8.514 billion Euros (8.431 billions in 2010).
As in past years, 53.87% of the total (53.92% in 2010) was invested in Health District care, a figure that confirms the ongoing development and investment in territorial and home care services; hospital care for people requiring complex care as hospitalized Patients absorbed 41.56% of total resources (41.47% in 2010); for general health care in daily/work environments 4.57% of the total was used (4.61% in 2010). The method used for processing data was the same used in 2010; for services financed through the Regional Fund for non self-sufficient people, costs only included the expenditure share from the Regional Healthcare Fund; the share financed by regional resources was excluded.

Per capita expenditure

Total per capita expenditure for resident citizens in 2011 was 1,909 Euros, with a very little increase (+0.38%) in comparison to 2010 (1,902 Euros).

Expenditure by levels and functions of healthcare - Period 2010-2011

Levels of care	Cost in thousand Euros in 2010 (1)	% of total	Per capita cost in Euros in 2010	Cost in thousand Euros in 2011 (1)	% of total	Per capita cost in Euros in 2011
Total general health care in daily/work environments	**388,435**	**4.61%**	**87.63**	**389,346**	**4.57%**	**87.31**
Primary care (contracting general practice physicians and paediatricians, continuity of care)	489,194	5.80%	110.37	495,802	5.82%	111.19
Territorial emergency services	124,849	1.48%	28.17	123,900	1.46%	27.79
Territorial pharmaceutical services	1,076,909	12.77%	242.96	1,034,929	12.16%	232.09
Supplementary care and prosthesis	133,667	1.59%	30.16	135,542	1.59%	30.40
Specialist care including emergency care not followed by admission	1,455,509	17.26%	328.38	1,500,394	17.62%	336.47
Home care (2)	192,690	2.29%	43.47	216,389	2.54%	48.53
Healthcare for women, families, couples (Family Advisory Health Centres, community paediatricians)	89,550	1.06%	20.20	88,867	1.04%	19.93
Psychiatric care	363,929	4.32%	82.11	367,635	4.32%	82.44
Rehabilitation for disabled (2)	141,513	1.68%	31.93	144,090	1.69%	32.31
Care for substance abusers	75,431	0.89%	17.02	74,363	0.87%	16.68
Care for elderly (2)	352,573	4.18%	79.54	353,175	4.15%	79.20
Care for terminally ill	25,871	0.31%	5.84	26,644	0.31%	5.98
Care for people with HIV	4,300	0.05%	0.97	4,710	0.06%	1.06
Hydrothermal treatment	20,382	0.24%	4.60	20,194	0.24%	4.53
Total Health District care	**4,546,367**	**53.92%**	**1,025.70**	**4,586,634**	**53.87%**	**1,028.57**
Total hospital care	**3,496,538**	**41.47%**	**788.85**	**3,538,426**	**41.56%**	**793.50**
Total of care levels for residents	**8,431,340**	**100%**	**1,902.19**	**8,514,406**	**100%**	**1,909.38**

Source: Final balance LA form 2010 and 2011.
Per capita expenditures are calculated for the resident regional population as of December 31st (self service statistics).
Population as of 31/12/2010: **4,432,439** *- Population as of 31/12/2011:* **4,459,246**

NOTES
1. *The cost of prison health care, which amounted to 17.808 million Euros in 2010 and 18.446 million Euros in 2011, was not included in the per capita figure for 2010 and 2011.*
2. *For care activities financed through the Regional Fund for non self-sufficient people, costs include exclusively the expenditure share referred to LEA from the Regional Healthcare Fund, the share financed by regional resources was excluded.*
3. *Specialist care level does not include the expenditure for diagnostic tests carried out as part of screening programs (mammographic, cervical and colorectal), estimated around 17 million Euros, but are allocated to total general health care in daily/work environments.*

The breakdown was done at full cost, namely Health Trust general costs were re-assigned proportionally to healthcare functions.

Expenditure trend: comparison among Regions, interregional mobility balance

The comparison of health expenditure with other Regions relates to the period 2009-2011.
The analysis highlights growth rates for expenditure in Emilia-Romagna in line with the national average, even though there was a greater increase in the resident population of Emilia-Romagna compared to national figures (2.18% vs 0.97% at national level in the period 2008-2010 - the 2011 national figure is not available).

Interregional mobility balance

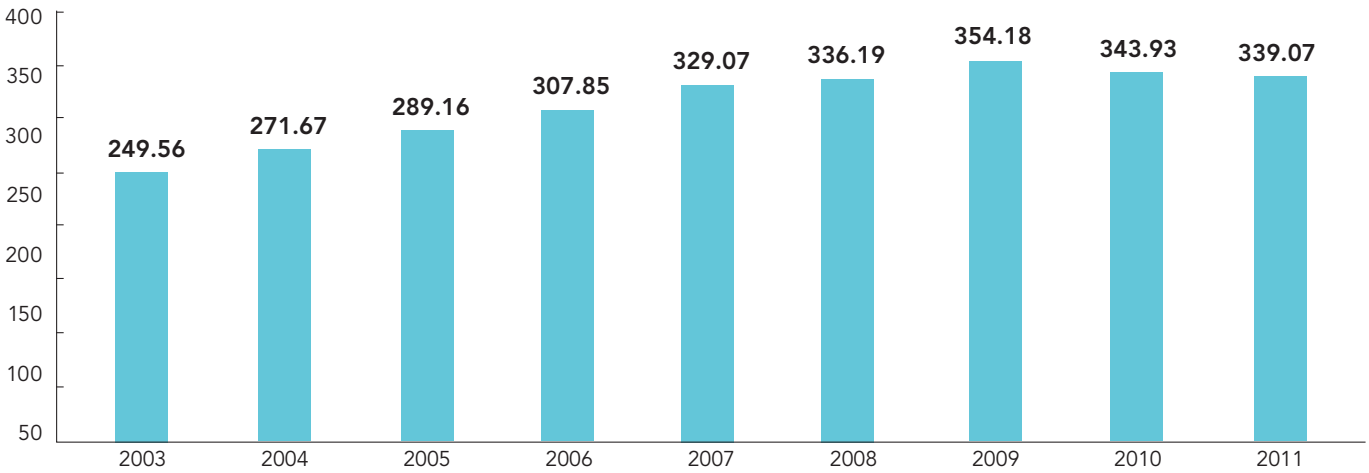
The credit balance of the healthcare mobility, which has been increasing from 2003 to 2009, is slightly decreasing since 2010 as a consequence of the new tariff system among Regions and of the stabilization of the number of services offered to citizens from other Regions. The 2011 credit balance was 339.07 million Euros.

Region by Region expenditure - Period 2009-2011 (absolute figures in thousand Euros)

Regions and Autonomous Provinces	Total expenditure 2009	Total expenditure 2010	Total expenditure 2011	% difference 2010/2009	% difference 2011/2010
Piemonte	8,333,699	8,459,592	8,445,965	1.51%	-0.16%
Valle d'Aosta	265,389	277,355	284,938	4.51%	2.73%
Lombardia	17,177,363	17,734,377	18,514,009	3.24%	4.40%
Provincia autonoma di Bolzano	1,082,304	1,102,868	1,145,423	1.90%	3.86%
Provincia autonoma di Trento	1,054,368	1,091,019	1,169,561	3.48%	7.20%
Veneto	8,707,708	8,853,658	8,946,090	1.68%	1.04%
Friuli Venezia Giulia	2,414,109	2,464,915	2,562,462	2.10%	3.96%
Liguria	3,269,395	3,244,496	3,304,101	-0.76%	1.84%
Emilia-Romagna	**8,253,732**	**8,405,237**	**8,518,794**	**1.84%**	**1.35%**
Toscana	6,844,518	7,081,695	7,111,197	3.47%	0.42%
Umbria	1,608,258	1,625,831	1,663,047	1.09%	2.29%
Marche	2,746,009	2,805,795	2,797,055	2.18%	-0.31%
Lazio	11,109,023	11,171,783	11,280,459	0.56%	0.97%
Abruzzo	2,373,675	2,337,738	2,358,247	-1.51%	0.88%
Molise	667,286	657,922	657,897	-1.40%	0.00%
Campania	10,096,817	9,990,819	9,976,620	-1.05%	-0.14%
Puglia	7,126,452	7,235,544	7,083,998	1.53%	-2.09%
Basilicata	1,033,500	1,051,993	1,067,584	1.79%	1.48%
Calabria	3,479,066	3,427,808	3,426,834	-1.47%	-0.03%
Sicilia	8,418,844	8,521,735	8,732,121	1.22%	2.47%
Sardegna	3,002,365	3,062,898	3,202,214	2.02%	4.55%
Italy	**109,063,879**	**110,605,079**	**112,248,615**	**1.41%**	**1.49%**

Source: General Report on the national economic situation, 2011.

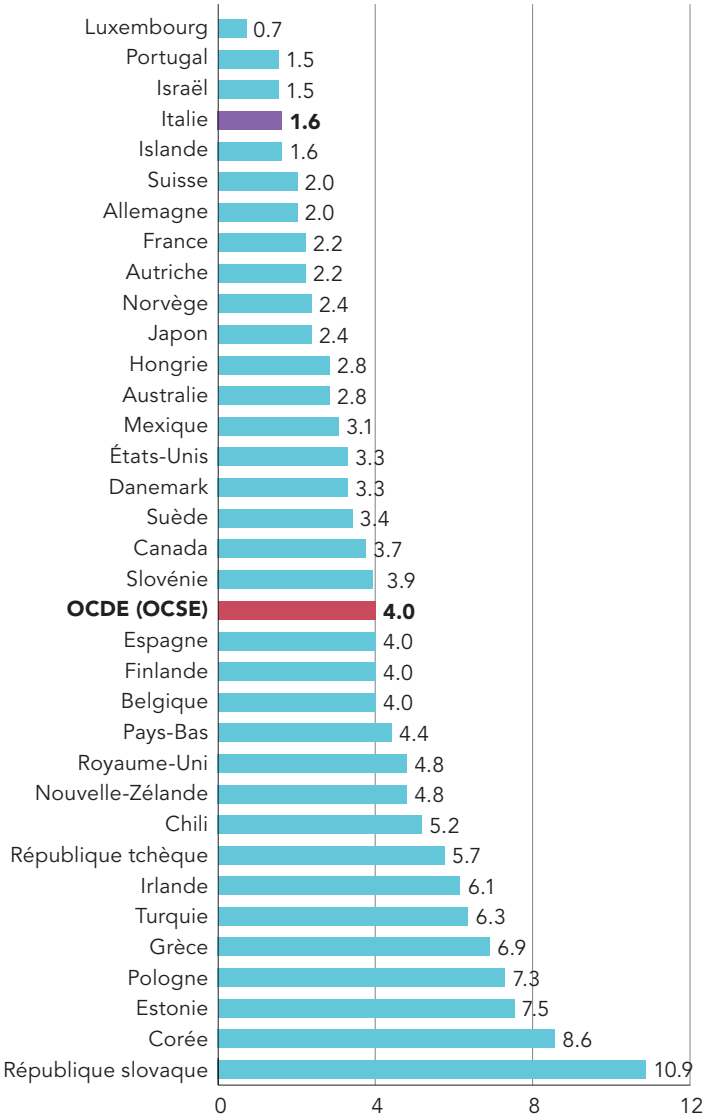
Interregional mobility balance. Period 2003-2011 (in million Euros)



Per capita expenditure trend: comparison among Countries and Italian Regions

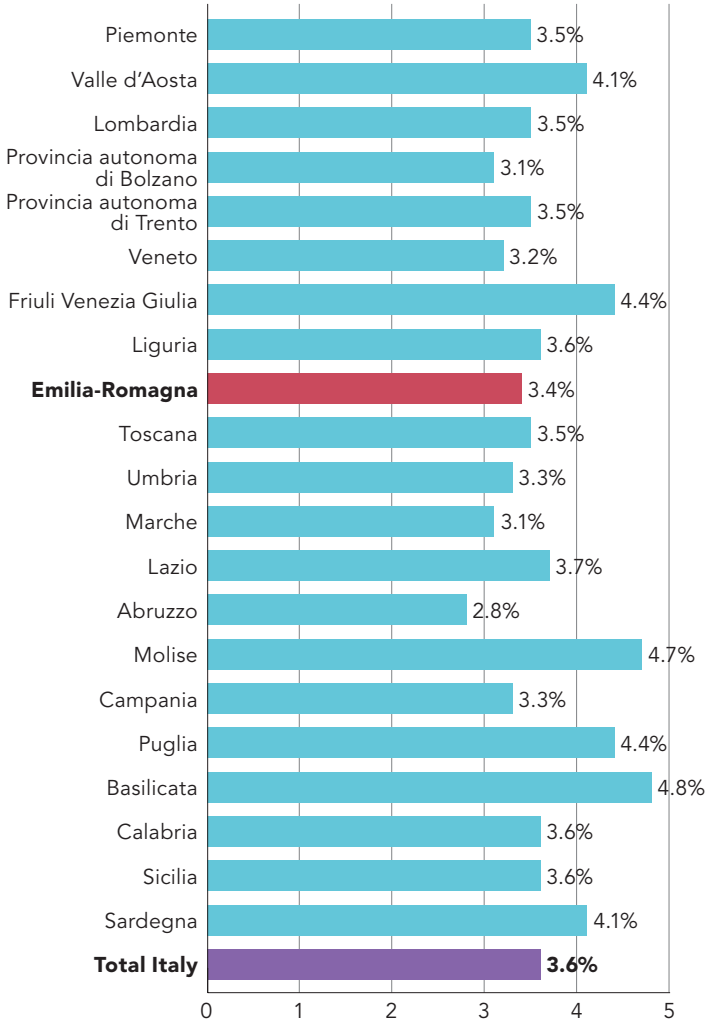
Considering per capita expenditure trends at international level, in the last decade Italy has registered a growth rate (1.6%) among the lowest in OCSE Countries (4%) and among Countries with advanced health systems. In Italy, the growth rate of Emilia-Romagna is lower than the national one: in the last years, the regional growth rate of gross per capita expenditure (which includes also costs of Patients coming from other Regions) was 3.4%, while in Italy it was 3.6%. The datum is very significant: Emilia-Romagna presents a lower growth rate even comprising health costs for people from other Regions (mobility counts for nearly 4% of total per capita expenditure in Emilia-Romagna). This indicates a very good capacity to control expenditure in Emilia-Romagna, not only at national level but also in comparison to other Countries with advances health systems: Switzerland, Germany, France, Austria, Norway, Australia, USA, Denmark, Canada.

Per capita health expenditure, average growth rate: comparison among Countries, period 2000-2009



Source: Panorama de la santé 2011. Les indicateurs de l'OCDE

Per capita health expenditure including interregional mobility, average growth rate: comparison among Regions, period 2001-2010



Source: 2011 OASI Report

Average payment periods for suppliers of goods and services

The average payment periods for suppliers of goods and services in Emilia-Romagna have decreased from 354 days at December 2007 to 282 days at December 2011. the gap between the Region and Italy has moved from +68 in 2007 to -23 in 2011.
The payment periods relate only to suppliers of goods and services: Health Trusts comply with compulsory payment due dates (salaries for permanent staff and professionals, contributions, taxes, utilities, insurance and loans) and guarantee contained timescales (30-90 days) for suppliers of services directly delivered to citizens (Regional Health Service-funded pharmacies, private hospitals, hydrotherapy, social co-operatives, managing bodies of protected facilities).

The improvement of the situation was possible through the intervention of the Region in the last years to support the liquid assets of the system, also with its own resources. The delays are mainly due to the transfer methods for resource funds assigned to the Region by the State: payment of the Regional Health Fund is made a year in arrears, once performance levels have been verified. At the end of 2011 the Italian Government decontrolled 600 million Euros for the Region, that could distribute extraordinary resources to Health Trusts; the positive impact on reduction of payment periods will be seen in 2012. At the end of 2011 Emilia-Romagna could boast being in credit with the State for an amount of 418 million Euros.

Average payment periods for suppliers of goods and services of Health Trusts - Period 2007-2011

Health Trust	2007	2008	2009	2010	2011
Health Trust of Piacenza	400	240	210	250	315
Health Trust of Parma	330	210	120	120	180
Health Trust of Reggio Emilia	330	270	180	225	270
Health Trust of Modena	465	360	270	240	210
Health Trust of Bologna	395	300	300	325	305
Health Trust of Imola	360	180	220	270	330
Health Trust of Ferrara	480	285	240	320	300
Health Trust of Ravenna	300	240	240	270	300
Health Trust of Forlì	360	360	540	360	420
Health Trust of Cesena	390	270	240	240	300
Health Trust of Rimini	270	240	270	300	270
University Hospital Trust of Parma	165	180	210	240	260
Hospital Trust of Reggio Emilia	285	285	300	290	300
University Hospital Trust of Modena	375	375	360	345	390
University Hospital Trust of Bologna	405	225	255	315	300
University Hospital Trust of Ferrara	375	285	285	315	255
IRCCS Rizzoli of Bologna	330	90	90	90	90
Average regional value	**354**	**259**	**255**	**266**	**282**
Payment periods registered by Assobiomedica in Emilia-Romagna	**367**	**260**	**252**	**263**	**293**
Payment periods registered by Assobiomedica in Italy	**286**	**269**	**259**	**278**	**305**

Purchases via Intercent-ER

Also in 2011 as in the previous two years health expenditure was found to be the main area of intervention of Intercent-ER, the Agency established by the Region to manage purchases of goods and services through innovative computerised tools, with the aim of promoting and supporting purchase optimization. Adherence to arrangements agreed by the Agency concerns all Health Trusts: an order percentage of 34% of the total volume of expenditure for the purchase of goods and services of Health Trusts was achieved through Intercent-ER. The figure, which has increased in comparison to 2012 (32%), confirms the value of the system to optimise purchases and therefore to reduce expenditure and to improve quality and efficiency.
Intercent-ER acts as a regional reference for purchases for all Health Trusts and the Agency signs arrangements and tenders at regional level and at Vast Area level.

The Regional Fund for non self-sufficient people: resources used, areas of intervention

Regional expenditure for 2011 resulting from the financial contribution from the Regional Fund for non self-sufficient people was 44.1 million Euros, to which National Fund resources were added (a fund discontinued at national level and cancelled from 2011 onwards) for further 18 millions, amounting to a total of 459.1 million Euros spent in 2011 (in 2010, 468.1 millions). Of this amount, 65.9% was allocated to the elderly (302.6 million Euros), 32.4% to the disabled (148.7 millions) and 1.7% to cross sector activities for elderly and disabled (7.8 millions).
Notwithstanding the strong investment of regional resources to face the cancellation of the National Fund, expenditure registered a decrease of about 9 million Euros (-8.1 million for the elderly, -1.1 for the disabled) and a very slight increase for cross sector activities (+0.2 millions).

Regional Fund for non self-sufficient people: resources used in million Euros, areas of intervention - Year 2011

Areas of intervention	Resources used from the Regional Fund for non self-sufficient people	Resources used from the National Fund for non self-sufficient people	Total resources used	% of total
Residential care for the elderly	203.0	0.59	203.6	44.3%
Home care for the elderly	91.1	4.72	95.8	20.9%
Access and handling	1.7	1.39	3.1	0.7%
Total for the elderly sector	**295.9**	**6.71**	**302.6**	**65.9%**
Residential care for the disabled	68.3	1.51	69.8	14.9%
Home care for the disabled	70.2	6.89	77.1	16.8%
Access and handling	1.7	1.42	3.1	0.7%
Total for the disabled sector	**140.2**	**8.46**	**148.7**	**32.4%**
Emersion and qualification of care work for family assistants	0.8	2.35	3.2	0.2%
Counselling service and financial support for home adaptation	0.6	5.16	5.8	0.2%
Social network support programs and prevention programs for subjects at risk	3.7	2.06	5.8	1.2%
Total for cross sector activities	**5.0**	**2.81**	**7.8**	**1.7%**
Total	**441.1**	**18**	**459.1**	**100.0%**

Pharmaceutical care and expenditure

Pharmaceutical care is based on the governance of drug choices and guidelines for their appropriate use. At the end of 2011 the Regional Therapeutic Handbook lists more than 150 technical-scientific documents to support therapies. Special attention has been given to safety and clinical auditing, with training courses to improve quality of care processes.

Expenditure

In 2011 territorial pharmaceutical expenditure decreased by 6.2% compared to 2010. Regional Health Service-contracted pharmaceutical expenditure (drugs distributed by public pharmacies on presentation of a Health Service prescription) decreased by 8.7% as a consequence of the reduction of maximum reimbursement price for patent-expired drugs and of the introduction of contributions on income basis. Direct distribution of class A medicines (directly delivered by Health Trusts to Patients after discharge from hospital or specialist consultation, for the treatment of chronic conditions, in residential and home care; medicines distributed by pharmacies "on behalf" of Local Health Trusts on the basis of specific agreements) increased by 1.9%.
The increase in hospital pharmaceutical expenditure in 2011 (+2.2% on 2010) was more contained than 2010 against 2009 (+6.2%).
At national level, contracted pharmaceutical net expenditure in 2011 decreased by 8.6% against a slight increase in consumption (number of prescriptions) by 0.5% *(source: 2011 OSMED Report).*

Per capita cost

The gross per capita cost of contracted pharmaceutical expenditure in Emilia-Romagna was lower than the nation figure: 170.2 Euros against 204.3 Euros *(source: 2011 OSMED Report).*

Pharmacovigilance and medical devices vigilance

In 2011 educational activity on pharmacovigilance continued, with training courses for healthcare workers to signal adverse reactions to medicines. This activity is coordinated by the Regional Pharmacovigilance Centre and involves all Health Trusts and the National Network for the Italian Drug Agency. In 2011 the vaccine-vigilance sector was also implemented.
Pharmacovigilance activities registered a marked increase in the reporting of suspected adverse reactions (1,226 in 2011, 687 in 2007), mainly dermatologic, systemic and gastrointestinal ones - in 2011 there were 28 reactions per 100,000 inhabitants (39 at national level).
A regional system with an Observatory has been developed for the clinical and financial management of medical devices. Workers' involvement and their signalling of accidents have increased: 270 in 2011 (82 in 2007).

Generic medicines

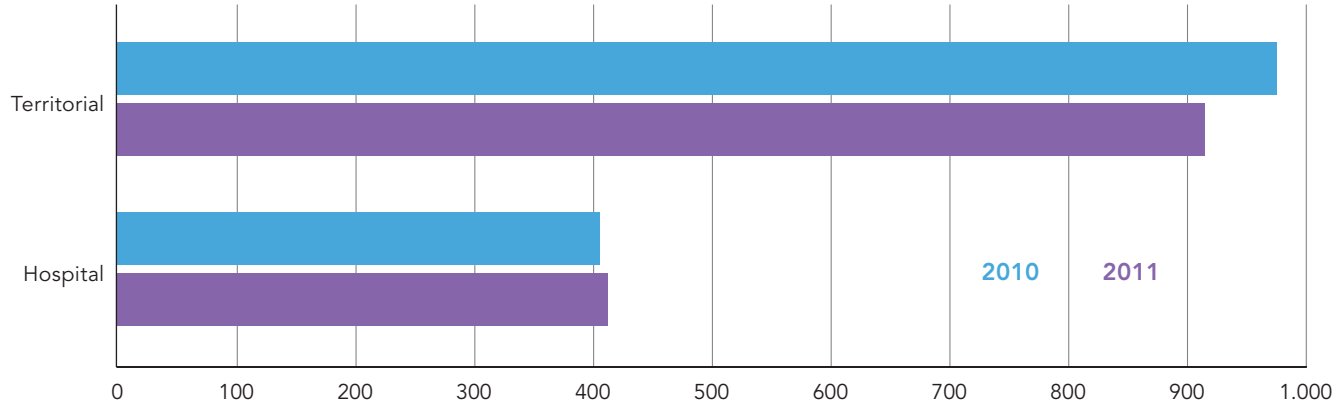
The use of patent-expired medicines is constantly increasing, thus contributing to contain contracted pharmaceutical expenditure and enabling the use of spare resources for research on innovative drugs. From 2005 to the present expenditure for generic medicines has risen from 15% to 41% of contracted pharmaceutical expenditure; consumption percentage of the total number of medicines provided rose from 26% in 2005 to 57% in 2011.

For more information: **http://www.saluter.it**

Pharmaceutical expenditure by type and percentage variation - period 2010-2011

	2010	2011	% variation
Contracted pharmaceutical net expenditure	742,750,167	678,219,850	-8.7
Expenditure for drugs totally covered by Regional Health Service directly delivered to public	227,859,634	232,261,101	1.9
of which by Health Trusts' pharmacies	207,269,117	212,063,730	2.3
of which "on behalf" of RHS	20,590,517	20,197,370	-1.9
Total territorial pharmaceutical expenditure	**970,609,801**	**910,480,951**	**-6.2**
Hospital pharmaceutical expenditure	**404,253,862**	**413,221,256**	**2.2**
Total regional pharmaceutical expenditure	**1,374,863,664**	**1,323,702,206**	**-3.7**

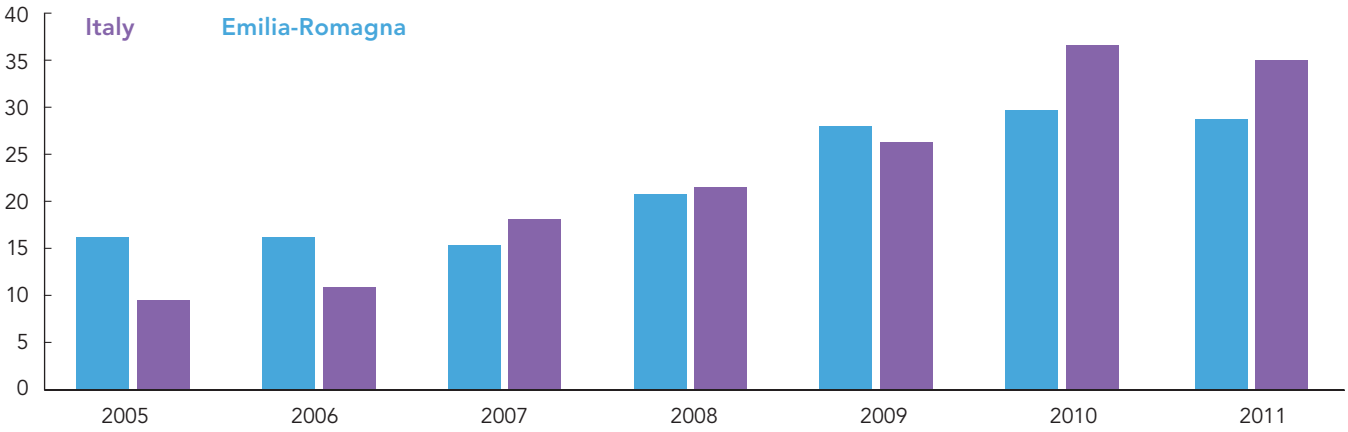
Division of pharmaceutical expenditure by type (in million Euros) - Period 2010-2011



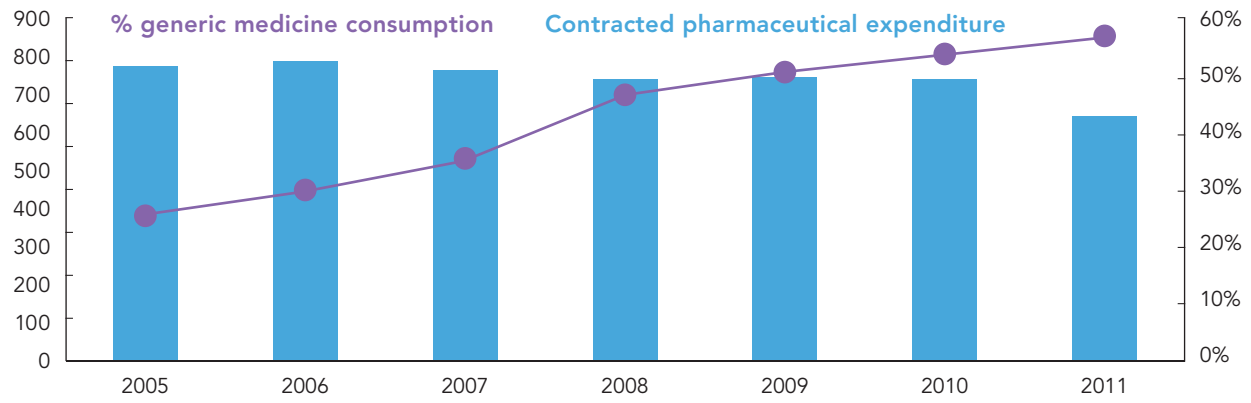
Per capita contracted pharmaceutical expenditure - Year 2011

Emilia-Romagna	170.2 Euros
Italy	204.3 Euros

Pharmacovigilance: reports of suspected adverse reactions per 100,000 inhabitants Emilia-Romagna and Italy - Period 2005-2011



Generic medicines: consumption trend in terms of contracted pharmaceutical expenditure in million Euros - Period 2005-2011



Investments for healthcare and social services facilities

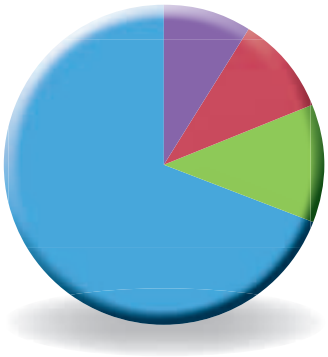
Between 1991 and 2011 investments to modernise, adapt and implement the Regional Health Service's technological and structural network amounted to 2.464 billion Euros - 1.343 million Euros from the State, 698 millions from Health Trusts, 360 millions from the Region and 63 millions from other bodies (Municipalities, Universities, Foundations and the Environmental Health Agency).
The 2.464 billions regarded 580 initiatives aimed at new constructions (72% - 1,780 millions), renovations (14% - 337 millions), operational and legislative adaptations for safety and accreditation (7% - 162 millions) of the hospital network and facilities on the territory (which include primary care, dentistry, public health and veterinary health, mental health, social-health integration, administrative premises), adaptation of technologies (7% - 185 millions) and initiatives for the freelance profession within public hospitals.
Of these 580 initiatives, 69% have been concluded, 12% are in progress, 10% still have to begin, 9% are in the planning stage.
These are significant results that confirm the effectiveness in implementing initiatives, which is also due to the strong synergy between the Region and the Health Trusts. Health Trusts also contributed with own resources to modernise their own structures.
Between 1991 and 2011 a sum of 563 million Euros was invested (168 from the State, 87 from the Region, 304 from implementation bodies) for social-health building projects, completed by organizations not belonging to the Regional Health Service.
There were 586 initiatives for social care facilities for elderly, disabled, children, single mothers and abused women, people on very low income. 68% of the initiatives have been concluded, 22% are in progress, 10% are in the planning stage.

Investments for health and social-health facilities implemented by the Regional Health Service Period 1991-2011

Health Trust	State share	Regional share	Health Trust share	Other funding	Total
Local Health Trust of Piacenza	86,069,990.93	19,932,306.90	15,301,112.14	950,280.69	122,253,690.66
Local Health Trust of Parma	43,472,978.28	7,888,781.04	49,348,960.88	1,000,000.00	101,710,720.20
University Hospital Trust of Parma	110,901,846.38	20,544,363.70	28,686,121.38	127,709.66	160,260,041.12
Local Health Trust of Reggio Emilia	50,728,748.16	10,463,381.88	48,731,796.58	103,291.38	110,027,218.00
Hospital Trust of Reggio Emilia	67,610,434.92	19,363,003.56	40,556,918.14	-	127,530,356.62
Local Health Trust of Modena	149,706,051.12	27,788,124.63	100,204,702.62	8,556,766.79	286,255,645.16
University Hospital Trust of Modena	65,918,165.61	12,196,407.32	17,466,185.61	-	95,580,758.54
Local Health Trust of Bologna	192,390,022.13	35,209,293.48	116,502,781.14	13,776,278.71	357,878,375.46
University Hospital Trust of Bologna	143,870,527.95	33,701,174.52	95,783,526.03	12,910,000.00	286,265,228.50
IRCCS Rizzoli in Bologna	10,211,379.55	4,860,601.67	8,490,640.71	22,284,125.00	45,846,746.93
Local Health Trust of Imola	18,976,855.53	8,586,923.27	11,536,338.07	-	39,100,116.87
Local Health Trust of Ferrara	48,691,078.32	16,908,835.63	17,648,528.77	-	83,248,442.72
University Hospital Trust of Ferrara	75,364,122.13	49,773,994.38	9,027,668.70	-	134,165,785.21
Local Health Trust of Ravenna	94,569,282.03	23,849,459.81	21,452,109.78	437,481.96	140,308,333.58
Local Health Trust of Forlì	63,944,093.73	20,338,745.92	57,520,027.96	-	141,802,867.61
Local Health Trust of Cesena	42,018,802.69	13,197,001.56	17,242,916.76	1,978,524.58	74,437,245.59
Local Health Trust of Rimini	78,168,484.64	35,750,979.86	42,802,305.31	750,000.00	157,471,769.81
Regional total	1,342,612,864.10	360,353,379.13	698,302,640.58	62,874,458.77	2,464,143,342.58

Regional Program for health and social-health facilities: implementation status of the 580 initiatives in 2011 - % values

69% FINISHED
9% IN THE PLANNING STAGE
10% TO BE ASSIGNED
12% IN PROGRESS



Regional Program for health and social-health facilities (580): fund allocation by area of intervention. Period 1991-2011 - % values

72% ENLARGEMENT
14% RENOVATION
7% LEGISLATIVE ADAPTATION
7% TECHNOLOGIES

Investments for health and social-health facilities implemented by organizations not belonging to the Regional Health Service - Period 1991-2011

Province	State share	Regional share	Implementation bodies' share	Other funding	Total
Piacenza	11,463,225.30	8,600,829.32	23,290,381.97	300,000.00	43,654,436.59
Parma	18,047,228.35	8,525,269.57	23,121,906.35	498,000.00	50,192,404.27
Reggio Emilia	28,634,507.79	12,172,526.15	52,348,292.32	60,000.00	93,215,326.26
Modena	17,138,393.84	12,868,343.27	55,312,057.91	828,136.00	86,146,931.02
Bologna	33,567,436.86	17,732,800.39	51,051,861.94	119,827.55	102,471,926.74
Ferrara	7,217,248.49	5,385,911.03	16,944,806.58	-	29,547,966.10
Ravenna	18,142,917.85	7,359,654.83	33,759,114.34	2,365,200.00	61,626,887.02
Forlì-Cesena	22,324,815.63	8,699,074.03	31,402,485.46	177,104.00	62,603,479.12
Rimini	11,320,244.70	5,334,628.85	16,707,375.28	-	33,362,248.83
Regional total	**167,856,018.81**	**86,679,037.44**	**303,938,282.15**	**4,348,267.55**	**562,821,605.95**

Hospital care: beds, admissions, extraregional attraction index, waiting times for planned admissions, visits to Emergency Room

As of 31st December 2011 beds in public and accredited private hospitals amounted to 20,493 - 15,907 public (77.6% of the total) and 4,586 accredited private beds (22.4%). In 2010 beds amounted to 19,606 (15,941 public - 81.3%; 3,665 accredited private - 18.7%). The small increase in 2011 is due to the conclusion of the accreditation process for private hospitals, that counts all authorised beds, not only those used by the Regional Health Service (3,016 in 2011).
In 2011, for every 1,000 inhabitants there were 3.72 beds for acute care (3.58 in 2010) and 0.88 beds for long-term care and rehabilitation (as in 2010). 14,723 beds (71.8% of the total) were reserved for standard admissions; 3,761 beds (18.4%) for long-term care and rehabilitation; 2,009 beds (9.8%) for day hospital treatments and day surgery.
In 2011 the hospitalization rate for 1,000 inhabitants registered a little decrease: 834,009 hospitalizations (777,767 for acute care, 22,698 for rehabilitation, 33,544 for long-term care) while in 2010 they amounted to 844,597.
The attraction index of hospitals in Emilia-Romagna for people coming from other regions was 14% (13.8% in 2010).

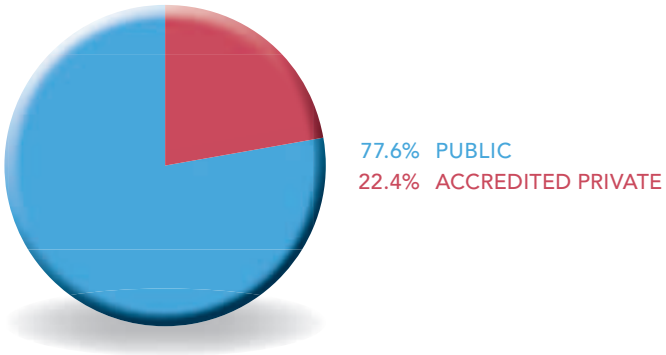
Waiting times for planned admissions

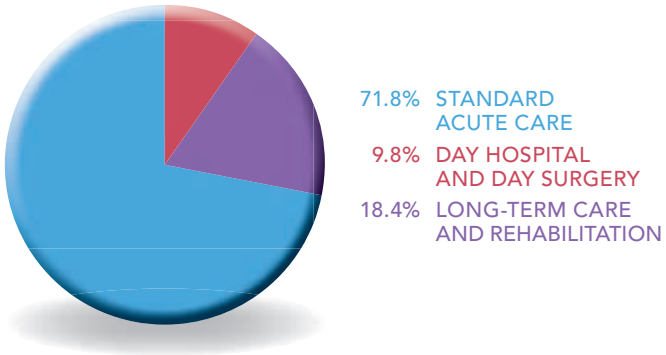
In line with national standards, the Region identified and monitors specific objectives for waiting times for planned surgery: treatment of 100% cases of uterine, breast and colorectal cancer within 30 days; treatment of 90% cases of coronary angioplasty and aortocoronary bypass within 60 days; treatment of 90% cases of carotid endarterectomy within 60 days; treatment of 90% cases of hip replacement within 90 days.
Goal attainment in the cardiology and vascular areas was satisfactory. In the area of oncology, standard performance levels have not yet been reached; however it should be considered that waiting times are counted starting from the diagnosis, but pre-surgical therapies may be needed. As for hip replacement, the national standard target has not yet been achieved; paradoxically, this is due to the strong attraction index of the IRCCS Rizzoli in Bologna: the great number of Patients from all the Country lengthens waiting times.

Visits to Emergency Room Departments

In 2011 there were 1,864,513 visits to Emergency Room Departments (1,862,192 in 2010). This figure has basically been stable in recent years keeping over 1,8 million visits/year. This value underlines the relevance of the activity. Also the percentage of hospital admissions following visits to Emergency Room was stable, accounting for 13.6% visits in 2011 (14% in 2010).

Public and accredited beds - Year 2011: 20,493





Beds per 1,000 inhabitants as of 31/12/2011

Acute care	3.72
Long-term care and rehabilitation	0.88

Hospital admission rate per 1,000 inhabitants as of 31/12/2011

Standard	127.5
Day hospital	41.7

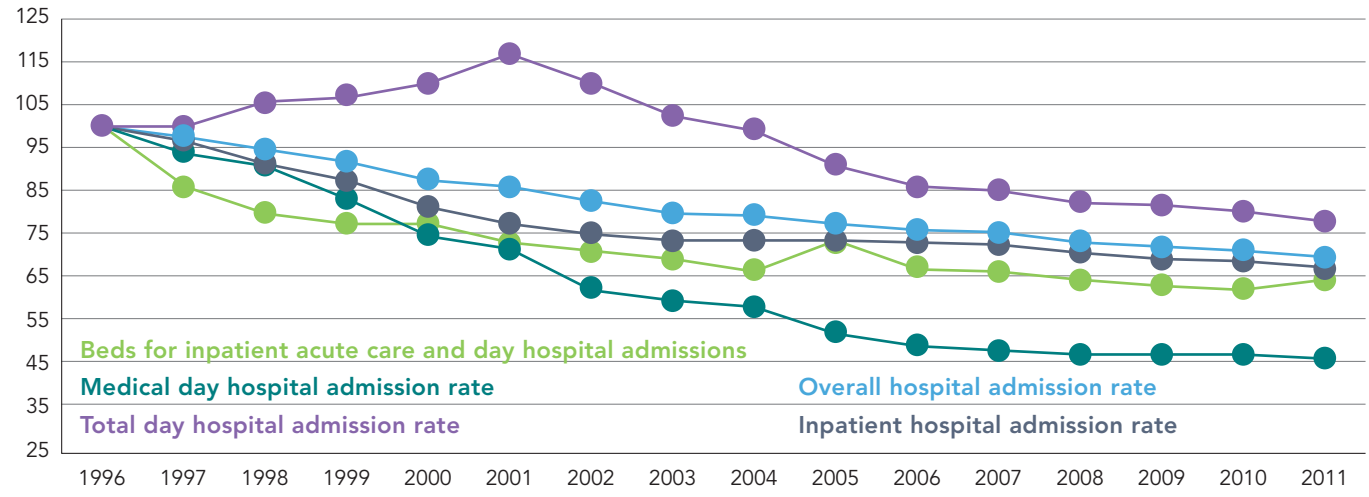
Admissions as of 31/12/2011

Acute care	777,767
Rehabilitation	22,698
Long-term care	33,544
Total	**834,009**

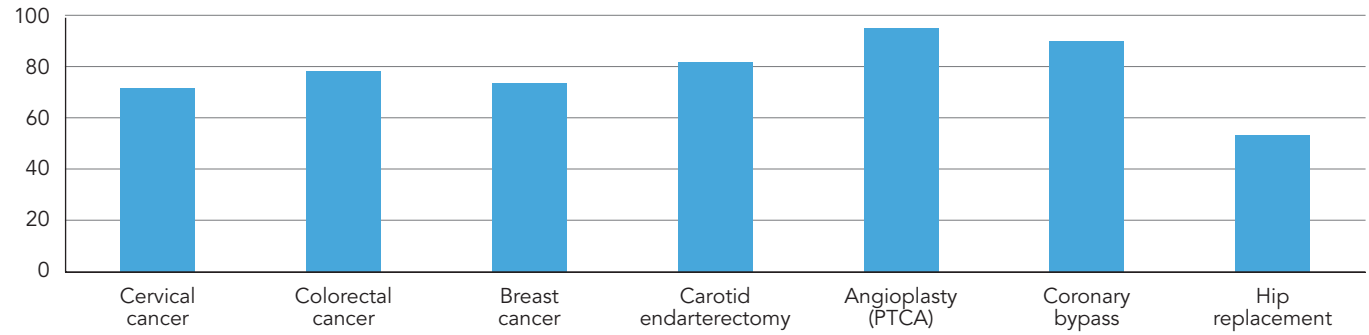
Extraregional attraction index

Year 2011	14%

Hospital admission rates - Period 1996-2011 (index number 1996 = 100)



Percentage of planned surgery performed within time limits set by national standards - Year 2011



Activity of Emergency Room Departments - Period 2009-2011

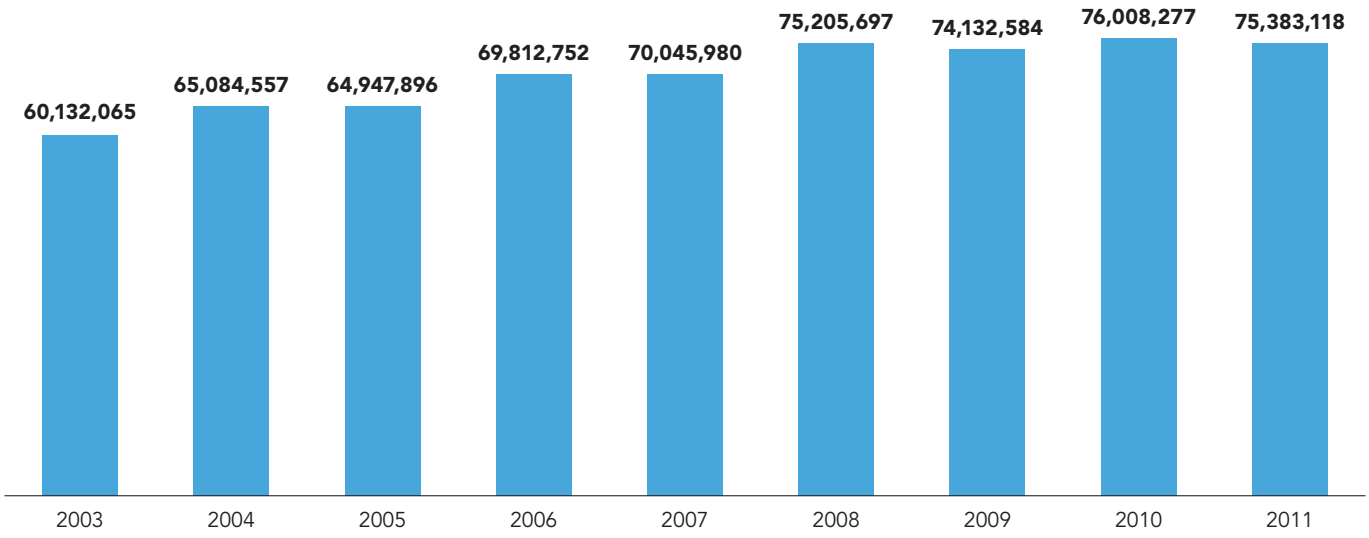
Health Trust	2009		2010		2011	
	Total	% admissions	Total	% admissions	Total	% admissions
Local Health Trust of Piacenza	112,126	14.3	106,798	15.0	106,265	15.0
Local Health Trust of Parma	38,606	14.1	39,325	13.8	38,886	14.3
Local Health Trust of Reggio Emilia	97,505	10.0	92,202	10.8	91,147	10.5
Local Health Trust of Modena	201,643	13.2	202,776	13.2	202,571	13.3
Local Health Trust of Bologna	245,551	13.5	246,856	13.2	245,184	13.8
Local Health Trust of Imola	59,764	15.5	59,231	15.6	58,064	15.5
Local Health Trust of Ferrara	92,493	12.5	89,257	12.3	90,104	12.2
Local Health Trust of Ravenna	184,439	12.6	183,586	12.6	192,777	11.6
Local Health Trust of Forlì	59,970	12.7	59,255	12.8	57,874	13.3
Local Health Trust of Cesena	75,315	14.9	55,074	18.2	84,941	10.0
Local Health Trust of Rimini	126,828	12.6	174,373	11.5	176,238	11.9
University Hospital Trust of Parma	82,088	18.0	82,535	17.7	84,425	16.5
Hospital Trust of Reggio Emilia	89,884	13.4	86,574	14.1	83,913	14.0
Local Health Trust of Modena	109,903	13.0	110,859	13.2	110,786	13.7
Local Health Trust of Bologna	135,010	18.9	131,382	19.0	135,219	18.8
Local Health Trust of Ferrara	72,699	18.5	77,980	18.8	79,329	17.4
Regional total	39,929	5.7	28,129	7.3	26,790	7.4
Totale regionale	**1,823,753**	**13.8**	**1,826,192**	**14.0**	**1,864,513**	**13.6**

Outpatient specialist care: number of services, type, trend from 2003 to 2011

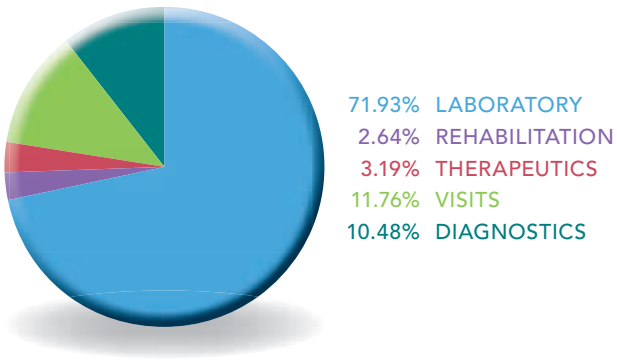
During 2011 a total of 75,383,118 outpatient specialist attendances were registered (76,008,277 in 2010), which do not include specialist medical procedures provided during hospitalization. The 2011 figure is a little lower than lower than 2010 (-625,159), but the trend is constantly increasing from 2003 (60,132,065 services offered in that year).
As in past year, the most significant percentage concerns laboratories with 71.93% (72.12% in 2010), followed by visits with 11.76% (11.62% in 2010), diagnostics with 10.48% (10.42% in 2010), therapeutic procedures with 3.19% (3.15% in 2010) and rehabilitation with 2.64% (2.68% in 2010). These percentages have basically remained stable over years.

Following regional indications (resolutions no. 1532/2006 and no. 925/2011), Health Trusts continued also in 2011 to be engaged in the enforcement of the regional plan for containing waiting lists. Resolution no. 925/2011 confirmed commitments to comply with recommended waiting times (24 hours for urgent cases, 7 days for deferrable urgent cases, 30 and 60 days respectively for planned visits and examinations), paying particular attention to appropriateness throughout the whole care path, from prescription to treatment. The monitoring of waiting times involves the entire offer, with specific focus on delivery times for more critical visits and examinations. On the website **http://www.tdaer.it** ex post waiting times from reservation to treatment can be seen.

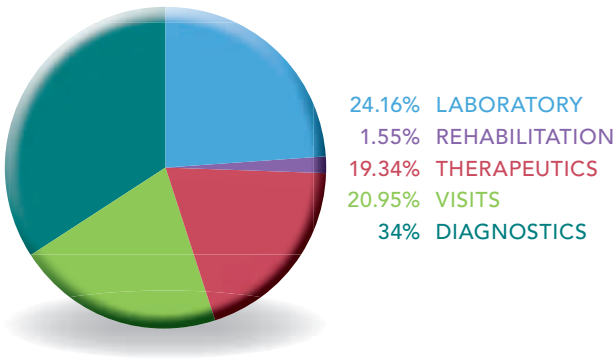
Specialist medical procedures - Period 2003-2011



Type of outpatient medical procedures Year 2011



Economic value of medical procedures Year 2011



Specialist medical procedure by type - Year 2011

		No. of medical procedures provided	% of medical procedures provided
Visits	First visit	6,060,887	
	Controls	2,735,156	
	Intensive short observation	70,901	
	Total visits	**8,866,944**	**11.76**
Diagnostics	Instrumental diagnostics with radiations	3,093,292	
	Instrumental diagnostics without radiation	4,371,229	
	Biopsy	76,310	
	Other diagnostics	363,050	
	Total diagnostics	**7,903,881**	**10.48**
Laboratory	Blood samplings	5,366,810	
	Clinical chemistry	38,640,105	
	Haematology/clotting	6,899,609	
	Immunohaematology and transfusions	148,057	
	Microbiology/virology	2,407,555	
	Anatomy and pathologic histology	581,668	
	Genetics/cytogenetics	177,772	
	Total Laboratory	**54,221,576**	**71.93**
Rehabilitation	Diagnostic rehabilitation	117,479	
	Rehabilitation and functional re-education	1,372,721	
	Physical therapy	407,443	
	Other rehabilitation	89,182	
	Total rehabilitation	**1,986,825**	**2.64**
Therapeutic treatments	Radiotherapy	373,039	
	Dialysis	465,781	
	Odontology	172,376	
	Transfusions	20,397	
	Out-patient surgery	312,952	
	Other therapeutic treatments	1,059,347	
	Total therapeutic treatments	**2,403,892**	**3.19**
Regional total		**75,383,118**	**100**

Care in Family Advisory Health Centres, Youth Health Centres, Health Centres for immigrant women and their children

Within the primary care network, Family Advisory Health Centres, Youth Health Centres and Health Centres for immigrant women and their children represent a reference point on sexual, reproduction and psycho-relational health of the population, and are the main access point to the Regional Health Service for some disadvantaged groups, in particular foreign people.

The network of Family Advisory Centres is formed by 218 facilities - 31 facilities for young people and 17 for immigrant women and their children. The support team (obstetrician, gynaecologist, psychologist; sometimes social worker; a cultural mediator is always present in facilities for immigrant women) is available for approximately 70 hours per week in each structure.

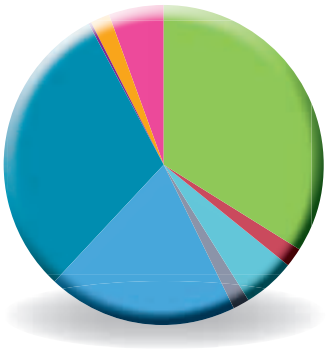
Positive aspects are multidisciplinarity, team work, local diffusion, collaboration with RHS care networks and with local bodies, direct access and free service for many procedures:; all features to guarantee equity and care continuity.

Since the second half of 2011 a new informative system has bee implemented to better monitor activities and users' characteristics.

Data reported in the under presented graphs are therefore estimated on the survey of 2011 second semester. Pregnancy care and maternity care are prevalent (33.9% of the total), followed by services for early diagnosis of female cancers (screening, 30.3%) and gynaecological specialist care (19.2%). Contraception amounts to 5.5% and medical certification for voluntary abortion to 1.9%.

Foreign women represent 21.8% of total users, in particular for voluntary abortion (55.2%), pregnancy (49.7%), sterility problems (49.3%), control of fertility (30.2%).

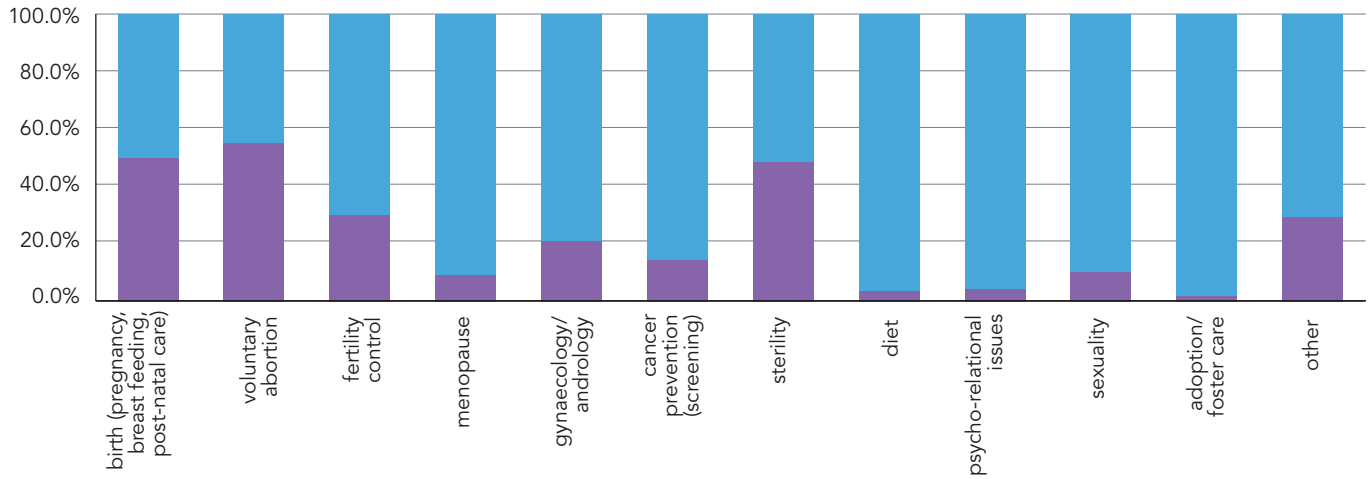
Areas of activity - Year 2011 (*)



33.9% PREGNANCY
1.9% VOLUNTARY ABORTION
5.5% CONTRACEPTION
1.6% MENOPAUSE
19.2% GYNAECOLOGY
30.3% CANCER PREVENTION (SCREENING)
0.2% FERTILITY CONTROL
2.0% PSYCHO-RELATIONAL ISSUES
5.3% OTHER (FOSTER CARE, SEXUALITY, ...)

(*) The figure as of 31/12/2011 is estimated from the survey of 2011 second semester.

Areas of activity for Italian and foreign women– Year 2011 (*)



(*) The figure as of 31/12/2011 is estimated from the survey of 2011 second semester.

Italian women Foreign women

Home care

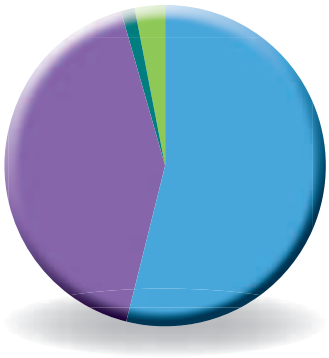
In 2011 the number of home cared Patients amounted to 97,037, a little decreased in comparison to 2010 (97,354) but nearly doubled from 2001 (55,000). The number of Patients handled (more services at home for the same person) was 115,799, 126,033 in 2010. Home visits by healthcare workers were 2,464,867 (2,525,799 in 2010). Considering the specific rates by age group, people aged over 80 use home care services the most - 154 for every 1,000 inhabitants in the 80-84 age group (177 in 2010), 283 in the 85-89 age group (309 in 2010), 397 in the 90 and over age group (484 in 2010). The rate per 1,000 inhabitants out of total population is 26 people (28 in 2010).

The home care system takes care of people who need help with daily activities or people at risk of non self-sufficiency, who have clinical conditions that can be treated at home, live in suitable conditions and can be supported by the family or neighbours. This form of care aims at avoiding improper hospitalizations, while guaranteeing care continuity, enhancing autonomy and relational abilities, supporting families, simplifying access to medical aids.
Support to home care is one of the priorities of the Regional Fund for non self-sufficient people.

People cared for in 2011: 97,037

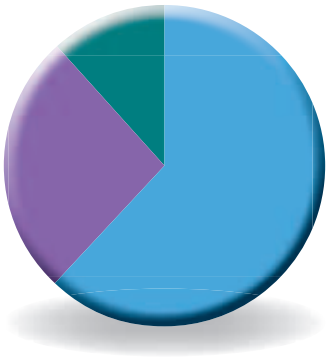
People handled in 2011: 115,799

Type of home care - Year 2011



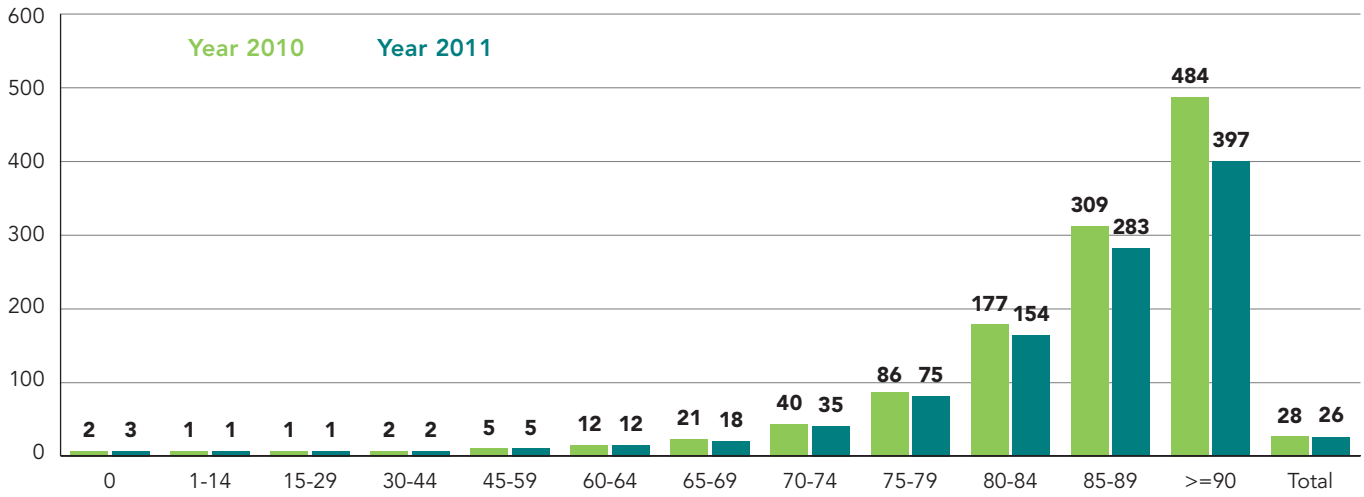
54% GENERAL MEDICAL CARE
41.8% NURSING CARE
1.2% NON-PROFIT CARE
3% SOCIAL-HEALTH CARE

Levels of care intensity - Year 2011



62.1% LOW INTENSITY
26.3% MEDIUM INTENSITY
11.5% HIGH INTENSITY

Home cared people, specific rates by age groups per 1,000 inhabitants - Period 2011-2011

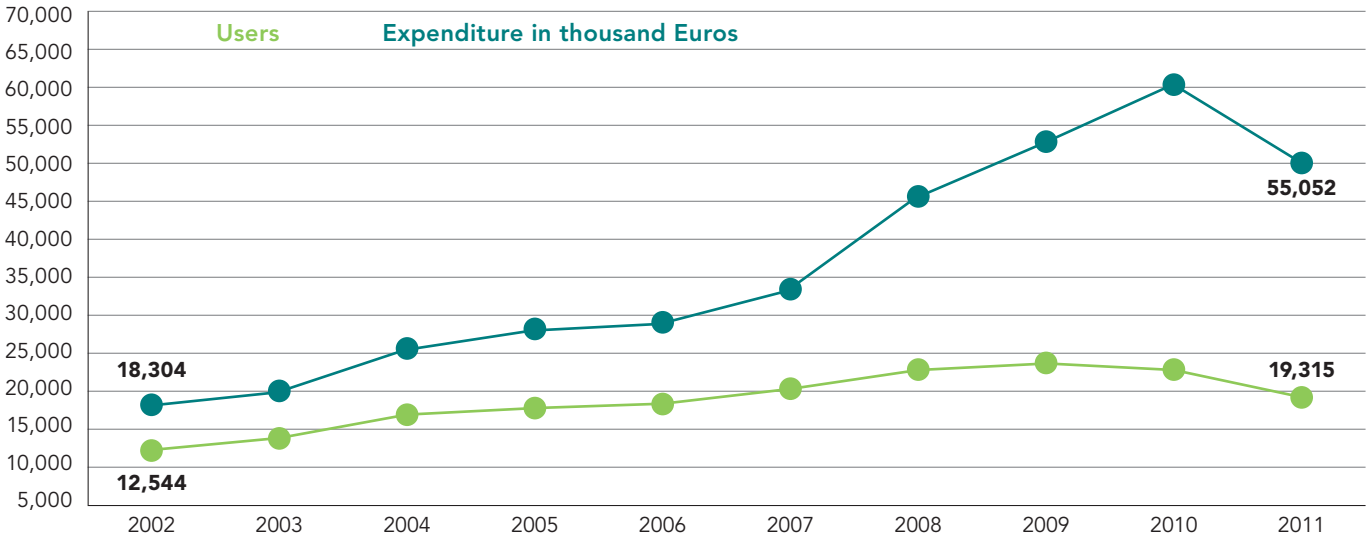


Care allowances

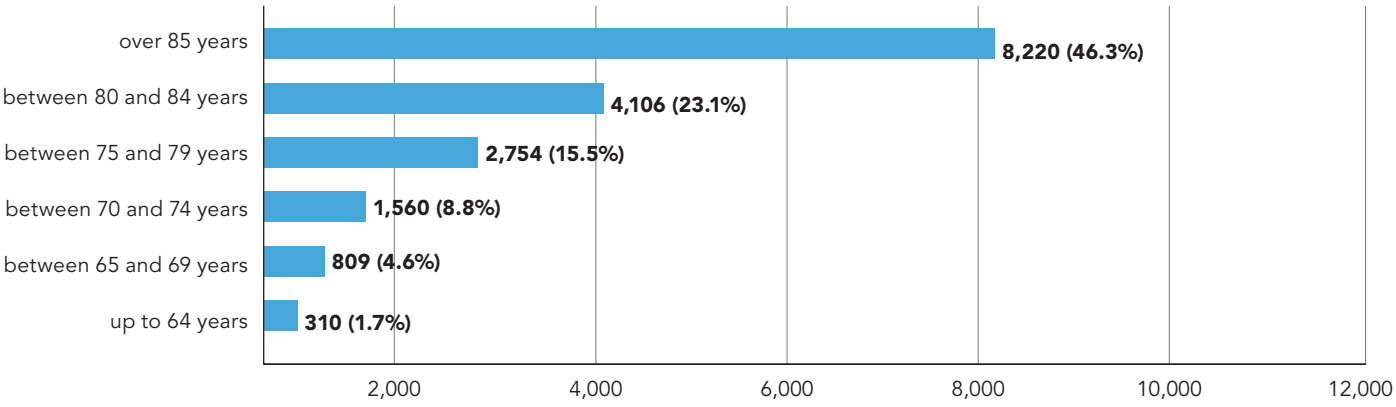
In 2011 in Emilia-Romagna 19,315 people benefited from care allowances - 17,759 were elderly and 1,556 disabled, showing a slight decrease with respect to 2010 when they amounted to 23,175 in total. This decrease is due to new and different criteria for accessing contributes in the various local areas.
Most beneficiaries are individuals aged over 85 years (46.3% - specific rate per 1,000 inhabitants: 78.7). Among disabled beneficiaries, the most represented age group is 45-49 years, reaching 39%.
Total expenditure for care allowances to elderly and disabled in 2011 was 55 million Euros (60.7 millions in 2010), that include additional allowances for family assistants (about 7 million Euros) and allowances for very severe disabilities (44 million Euros). 7,003 people (+235 with respect to previous year) received the additional contribution of 160 Euros aimed at the regularization of family assistants, and this figure is constantly increasing over years.
Long-term effects of the risen income limits to access allowances (now set at 15,000 Euros) are still to be considered.

People who benefited from care allowances in 2011: 19,315

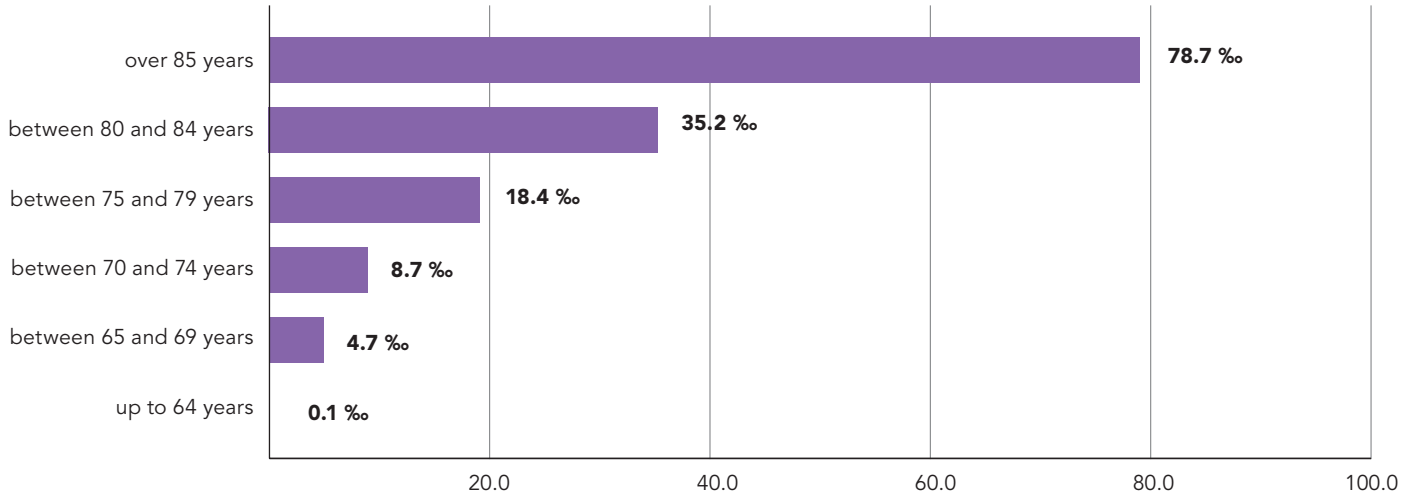
Care allowances: users and expenditure - Period 2002-2011



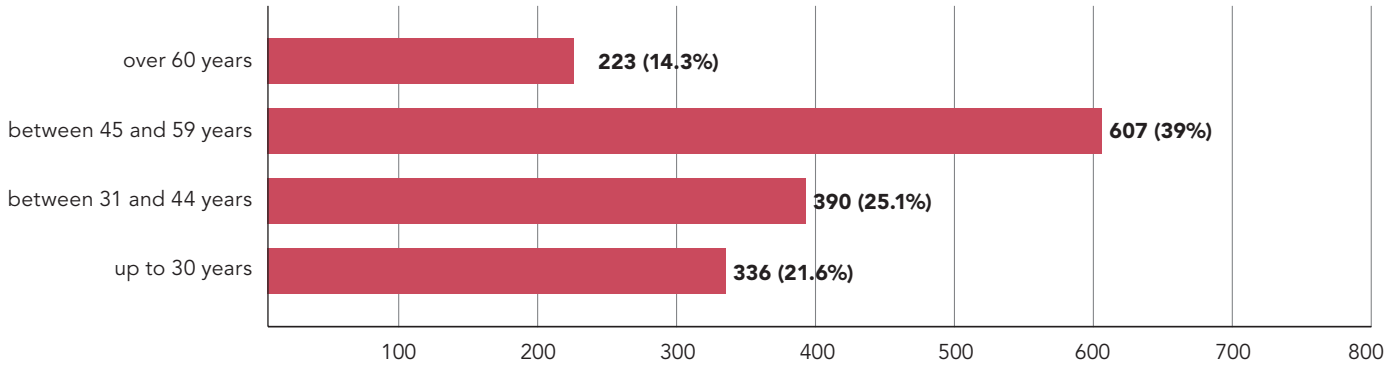
Elderly who benefited from care allowances by age - Year 2011



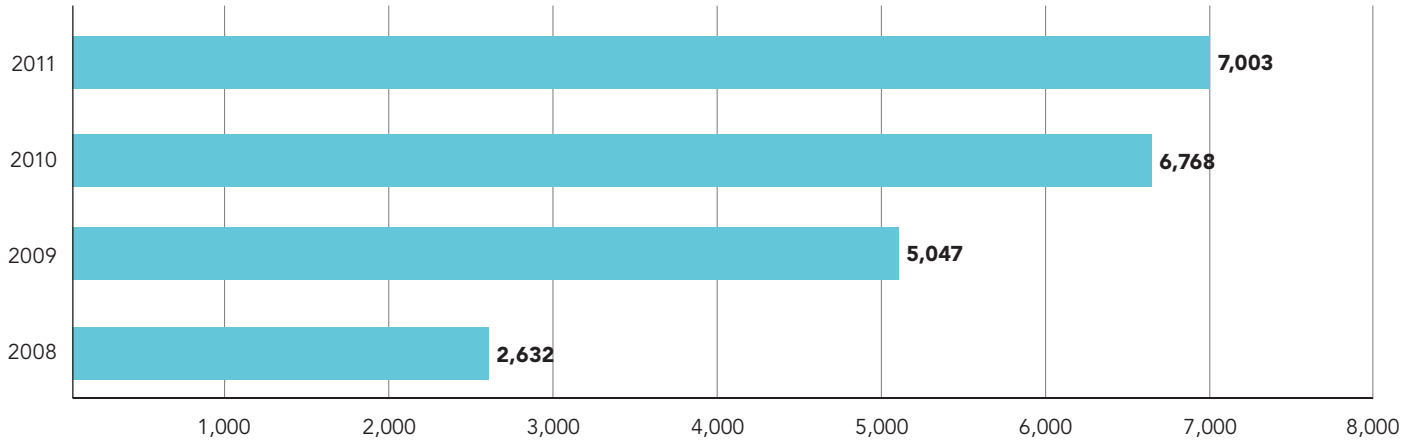
Elderly who benefited from care allowances by age - Specific rate per 1,000 inhabitants Year 2011



Disabled who benefited from care allowances by age - Year 2011



People who benefited from contributions for their family assistants - Period 2008-2011



Residential care for elderly, people with disabilities, mental health problems, addictions

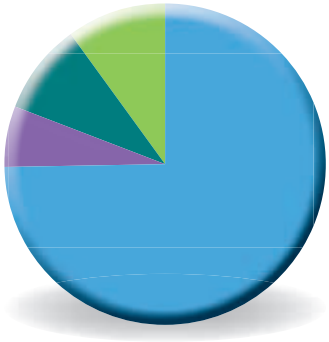
As of 31st December 2010 there were 29,433 Regional Health Service-funded residential and semi-residential places in the social-health and healthcare service network for the elderly, people with disabilities, mental health problems, pathological addiction: 20,982 in residential facilities and 8,451 in semi-residential facilities (in 2010 they amounted to 28,295, 20,255 residential places and 8,040 semi-residential places).
Of the 20,982 places in residential facilities, 15,689 (74.8%, 76.6% in 2010) are for the elderly; 2,090 (10%, 9.5% in 2010) for the disabled; 1,904 (9.1%, as in 2010) for people with mental health problems; 1,299 (6.2%, 4.8% in 2010) for people with pathological addictions.
Of the 8,451 places in semi-residential facilities, 3,991 (47.2%, 48.3% in 2010) are for people with disabilities; 3,085 (36.5%, 36.9% in 2010) for the elderly; 1,187 (14%, 12.8% in 2010) for people with mental health problems; 188 (2.2%, 2% in 2010) for people with pathological addictions.

Focus on the elderly in residential and semi-residential facilities

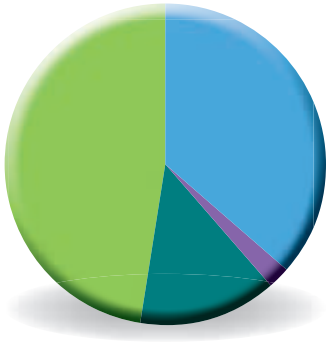
During 2011, 25,745 elderly were hosted in residential facilities; the total number of admissions was 28,849, as the same person can be admitted more than once in the same year; in semi-residential facilities, elderly hosted were 4,754 and admissions were 6,214.
The analysis per admission type shows that admissions in residential facilities were 69% long-term stay, 12% temporary relief stay, 3% temporary stay for people with significant cognitive and behavioral deficit, 16% recovery/rehabilitation following hospital discharge; admissions in semi-residential facilities were respectively 78%, 12%, 9% and 1%.
The analysis per age shows that both in residential and semi-residential facilities the most represented age groups are the "great old" between 85 and 89 years of age (28% in residential and 27% in semi-residential facilities) and over 90 (29.1% in residential and 17.2% in semi-residential facilities). Average age was 85 years.
An analysis of residents' gender revealed that women amounted for 71% of the total.
The rate of admission in residential and semi-residential structures per 1,000 inhabitants was equivalent to 7.5 in the 65-74 year age group; the rate in the over 90 age group reached 193.9 every 1,000.

Residential and semi-residential places - Year 2011: 29,433

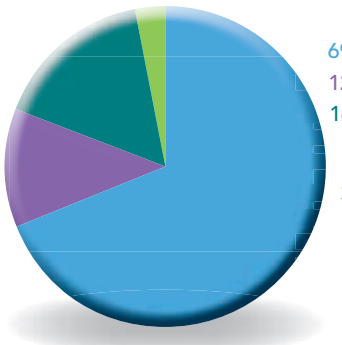
Residential places as of 31/12/2011



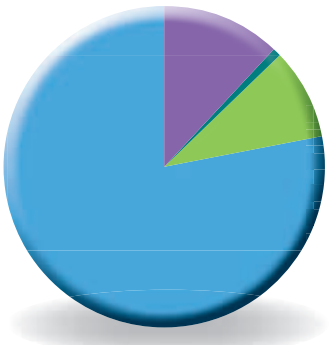
Semi-residential places as of 31/12/2011



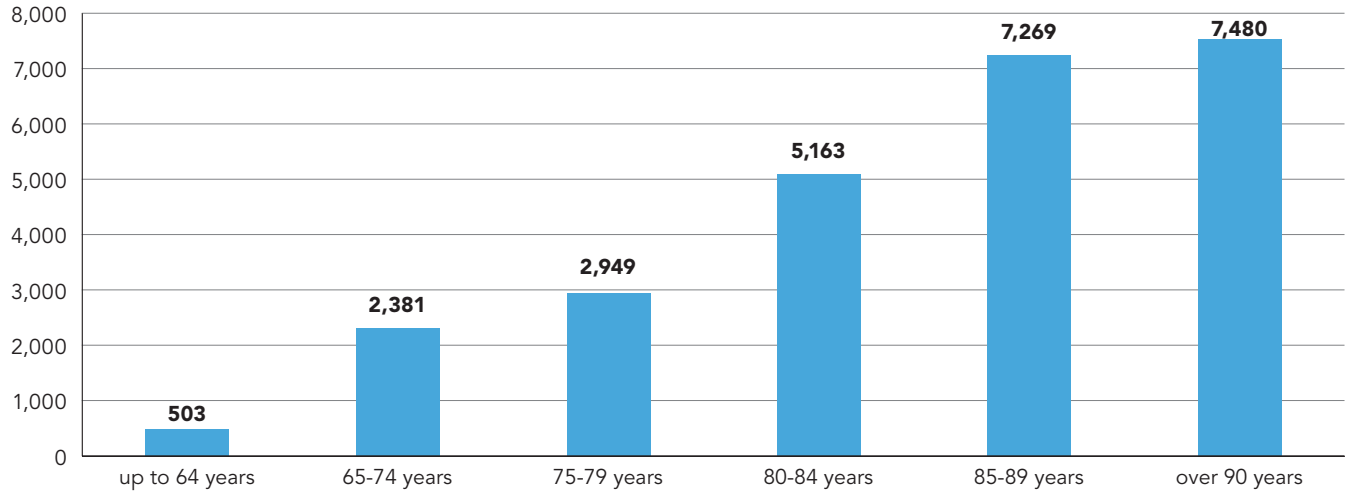
Admissions to residential facilities by type of stay - Year 2011



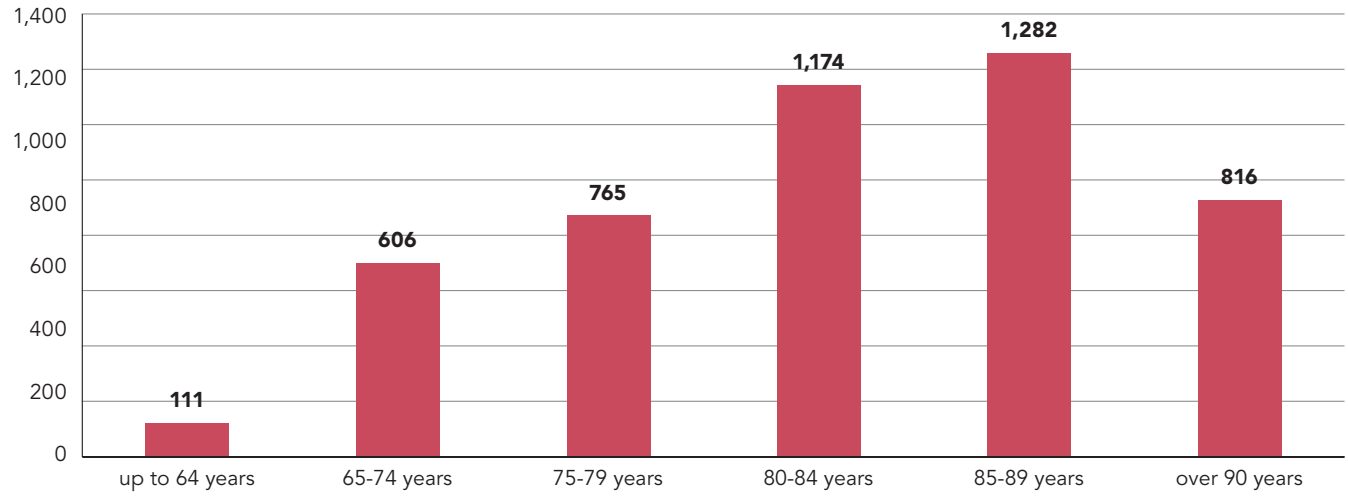
Admissions to semi-residential facilities by type of stay - Year 2011



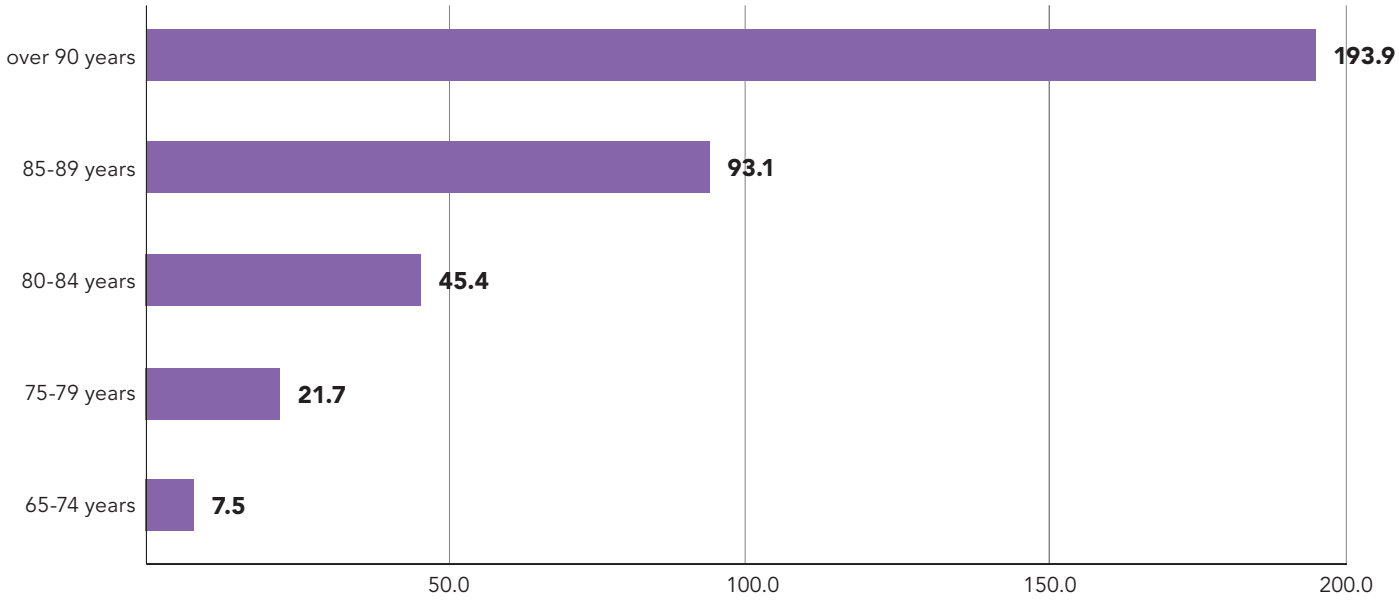
Number of people in residential facilities by age group - Year 2011



Number of people in semi-residential facilities by age group - Year 2011



People admitted to residential and semi-residential facilities: specific rate per 1,000 inhabitants Year 2011



Hospice care

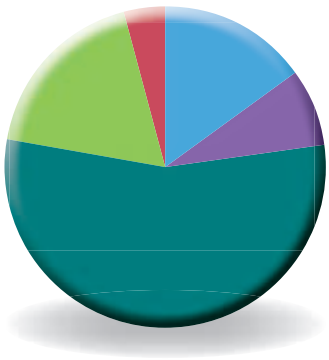
In 2011 in Emilia-Romagna there were 20 hospices offering 248 beds. Since 2009 (226 beds) an increase of 9.7% was registered. Most beds are to be found in the Health Trust areas of Bologna (43) and Parma (41). The number of beds in the area of Piacenza has more than doubled in three years (10 beds in 2009, 25 in 2011).
People admitted in 2011 amounted to 4,105, 168 more than in 2010 (3,937); the average stay length was 18.64 days. The analysis per Patients' gender revealed a balance between women (2,004) and men (2,101), the average age was 72 years.
The admission rate shows that about 92 people out of 100,000 inhabitants were hosted in a hospice in 2011 (450 people out of 100,000 in the over 85 year age group). 2,295 admissions (55% of the cases) are subsequent to Patient's discharge from a public or private hospital, or from a social-health facility; 724 admitted Patients (18%) were already in home care; 611 people (15%) are proposed to admission by general physician. Hospices are part of the Regional Health Service care system. They are directly or indirectly managed by Health Trusts, through specific agreements with non-profit volunteer organisations. They guarantee personalized care including pain treatment and psychological support. Family areas are provided in in-patient rooms.

Hospices: beds, Patients, average stay - Period 2010-2011

Health Trust (HT)	Hospice	Year 2010			Year 2011		
		Beds	Patients	Average stay (days)	Beds	Patients	Average stay (days)
Local Health Trust of Piacenza	Hospice Borgonovo Valtidone	10	165	20.3	10	131	20.73
	Hospice La casa di Iris (*)	-	-	-	15	115	19.95
Local Health Trust of Parma	Hospice Borgotaro	8	83	29.01	8	85	29.27
	Hospice Langhirano	10	113	27.31	10	119	28.72
	Hospice Fidenza	15	192	24.26	15	185	27.63
	Hospice Piccole Figlie	8	108	28.19	8	118	24.19
Local Health Trust of Reggio Emilia	Hospice Madonna dell'Uliveto di Albinea	12	209	19.95	12	237	18.22
	Hospice Guastalla	14	190	17.32	14	232	16.09
University Hospital Trust of Modena	Hospice Policlinico di Modena	10	238	15.08	10	257	13.65
Local Health Trust of Bologna	Hospice Chiantore Seragnoli	30	593	15.98	30	589	16.83
	Hospice Bellaria	13	293	14.14	13	291	14.6
Local Health Trust of Imola	Hospice Castel San Pietro	12	191	19.58	12	204	18.27
Local Health Trust of Ferrara	Hospice Ado	12	239	16.99	12	228	17.39
	Hospice Codigoro	11	218	16.83	11	178	17.22
Local Health Trust of Ravenna	Hospice Ospedaliero Lugo	10	126	23.33	10	185	17.56
	Hospice in Lugo (**)	8	23	31.6	-	-	-
	Hospice in Faenza	15	108	29.41	15	127	34.86
Local Health Trust of Forlì	Hospice in Forlimpopoli	11	291	13.04	11	264	14.3
	Hospice in Dovadola	8	147	18.81	8	165	16.46
Local Health Trust of Cesena	Hospice Savignano sul Rubicone	14	223	18.48	14	191	21.12
Local Health Trust of Rimini	Hospice in Rimini	10	187	15.1	10	204	14.43
Total		**241**	**3,937**	**18.88**	**248**	**4,105**	**18.64**

(*) Opened in 2011
(**) Closed in August 2010

Hospice admission proposal - % values - Year 2011



15% (611) GENERAL PHYSICIAN
8% (318) PROGRAMMED BY THE HOSPICE ITSELF
55% (2,295) TRANSFERRED FROM PUBLIC OR PRIVATE HOSPITAL, OR FROM SOCIAL-HEALTH FACILITY
18% (724) SUGGESTED BY THE HOME CARE SYSTEM
4% (157) SUGGESTED BY SPECIALIST-OUTPATIENT PHYSICIAN

Beds in hospice per Health Trust - Period 2009-2011

Health Trust	Year 2009	Year 2010	Year 2011
Local Health Trust of Piacenza	10	10	25
Local Health Trust of Parma	41	41	41
Local Health Trust of Reggio Emilia	26	26	26
Hospital Trust of Reggio Emilia	10	10	10
Local Health Trust of Bologna	43	43	43
Local Health Trust of Imola	12	12	12
Local Health Trust of Ferrara	23	23	23
Local Health Trust of Ravenna	18	33	25
Local Health Trust of Forlì	19	19	19
Local Health Trust of Cesena	14	14	14
Local Health Trust of Rimini	10	10	10
Total	**226**	**241**	**248**

Admissions in hospice by gender and age groups - Year 2011

Gender	age groups							Total admitted Patients	Average age
	≤ 29	30 - 44	45 - 54	55 - 64	65 - 74	75 - 84	≥ 85		
Female	1	52	157	286	446	657	405	2,004	73.12
Male	20	58	128	291	564	749	291	2,101	72.03
Total	**21**	**110**	**285**	**577**	**1,010**	**1,406**	**696**	**4,105**	**72.56**

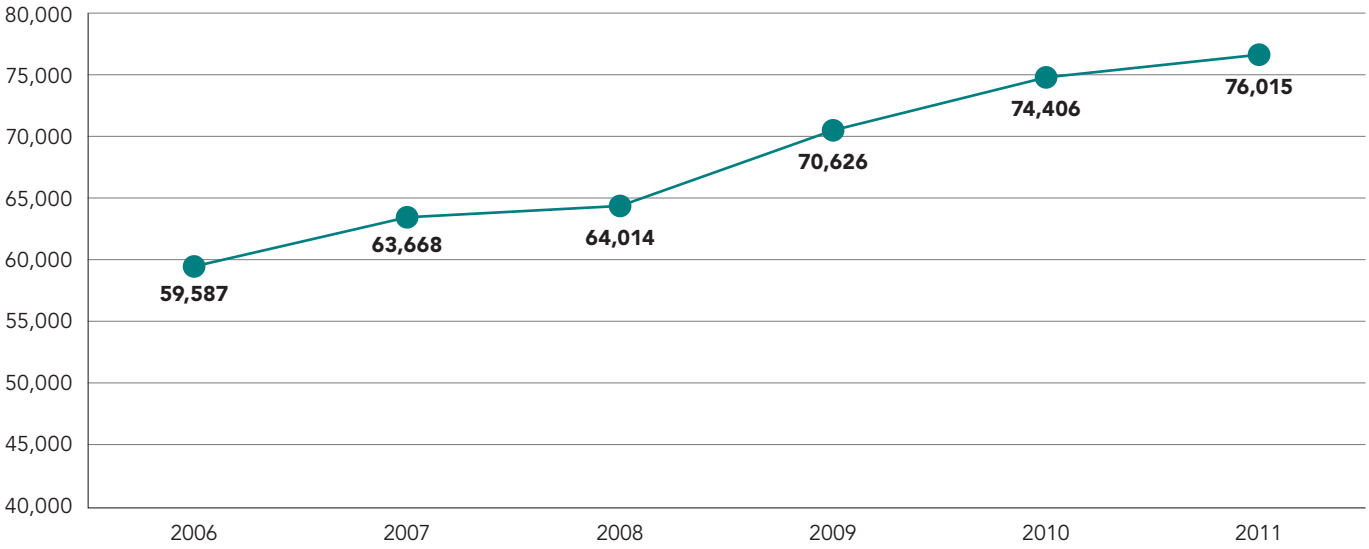
Admissions rates in hospice by gender and age groups per 100,000 inhabitants - Year 2011

Gender	specific rate by age groups							Total
	≤ 29	30 - 44	45 - 54	55 - 64	65 - 74	75 - 84	≥ 85	
Female	0.17	10.11	47.22	99.63	178.19	310.35	378.99	87.84
Male	3.29	10.97	38.89	109.10	256.82	496.42	612.59	97.67
Total	**1.77**	**10.55**	**43.08**	**104.19**	**214.94**	**387.78**	**450.88**	**92.61**

Mental Health Services for adults

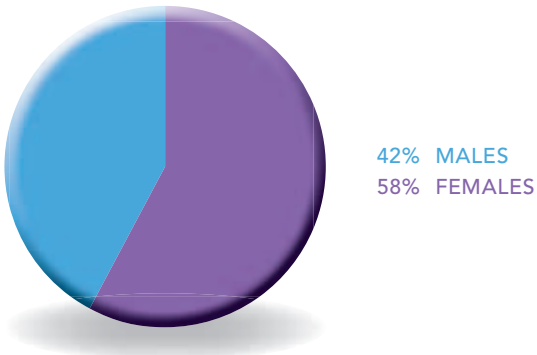
Mental Health Services for adults deal with prevention, promotion, diagnosis, treatment pathways, rehabilitation and social integration of people aged over 18 years with mental health problems.
The system of services refers to the Department for Mental Health and Pathological Addictions in Health Trusts and is made up of Mental health centres, Diagnosis and care psychiatric services (in hospitals), public and accredited private residential and semi-residential facilities. These services operate in connection with other services in the health and social care network, and in conjunction with family associations, volunteers, and local institutions, as provided for in the 2009-2011 Mental Health Implementation Plan (Regional Government resolution 313/2009).
During 2011 the growth trends were confirmed for Patients under treatment at mental health centres, with a figure of 76,015 (74,406 in 2010). The analysis of users' gender shows that women form the majority at 58% of the total. The most represented age group are people aged, with a peak in the 41-50 age group (23%).

Adults treated in Mental health centres by age group - Period 2006-2011 (*)

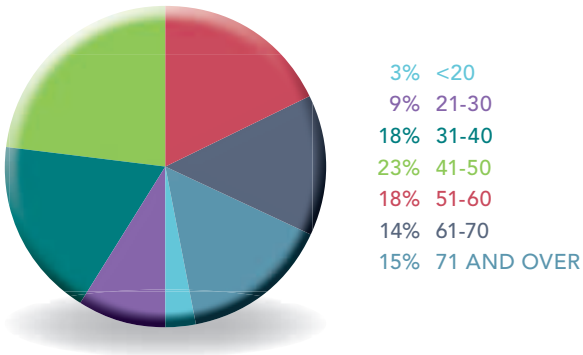


(*) Data of years before 2011 differ from those published last year as the counting method has changed: in the graph, Patients who referred to the Centres more times in a year are counted once.

Adults treated in Mental health centres by gender - % values - Year 2011



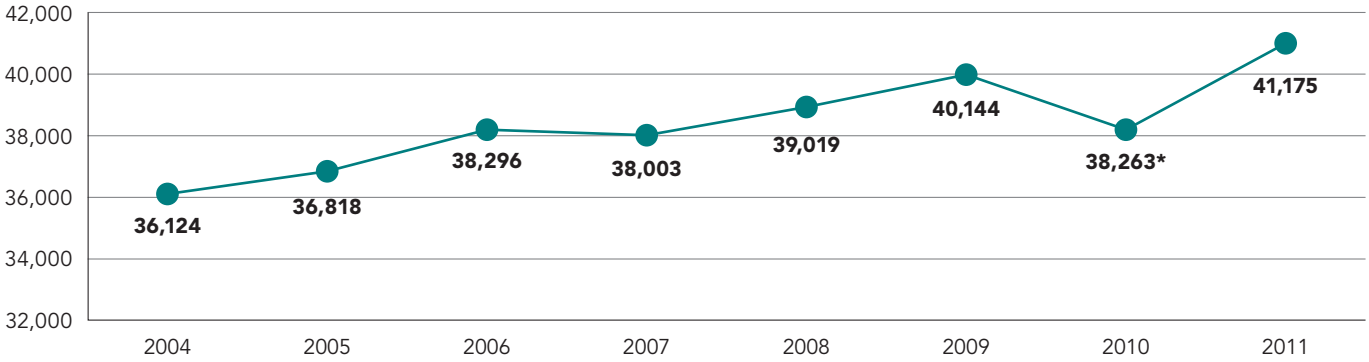
Adults treated in Mental health centres by age group - % values - Year 2011



Mental Health Services for minors

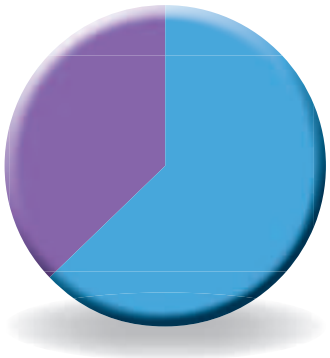
Neuropsychiatric Services for children and adolescents treat minor Patients with psychological and psychic disorders. These services deal with the counselling, diagnosis and treatment of learning, speech, food and affective disorders in children and adolescents; they also treat disabled minors.
Personalized programs of care and psychological and motor rehabilitation is guaranteed to each Patient.
In 2011 41,175 minors were admitted to Neuropsychiatric Services for children and adolescents, a figure constantly increasing over years. More males (63%) than females (37%) referred to the Services.
Access to these Services is particularly evident in the age groups 6 to 10 years (39%) and 11 to 17 years (32%), during the developmental and learning phases in which neurological, psychiatric and cognitive problems are more manifest.

Minors treated in Neuropsychiatric Services for children and adolescents - Period 2004-2011



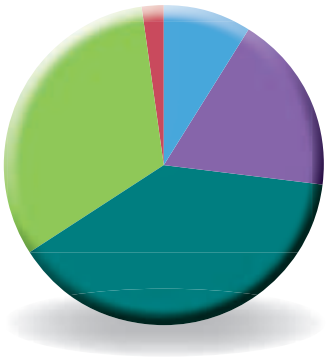
(*) The decrease in users number in 2010 can be attributed to the activation of the regional information flow on neuropsychiatry in childhood and adolescence, which defines new methods for counting users (children with open medical file and services).

Minor Patients treated at Neuropsychiatric Services for children and adolescents by gender - % values - Year 2011



63% MALES
37% FEMALES

Minor Patients treated at Neuropsychiatric Services for children and adolescents by age group - % values (*) - Year 2011



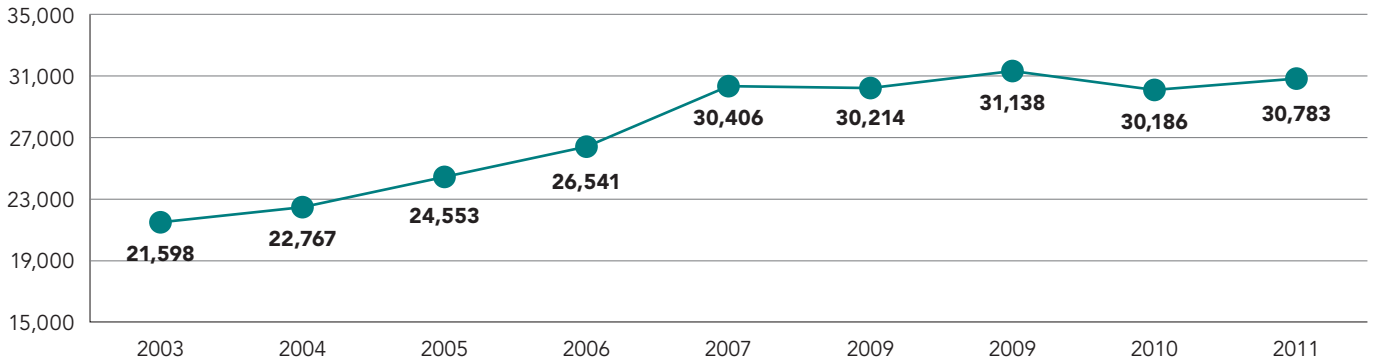
9% 0-2
18% 3-5
39% 6-10
32% 11-17
2% 18 AND OVER

(*) In Neuropsychiatric Services for children and adolescents some users continue the treatment also after 18 years of age for various reasons: treatment continuity (e.g. psychotherapy), end of scholastic period (e.g. users with certification of disability who still attend school), while waiting to be transferred to other services.

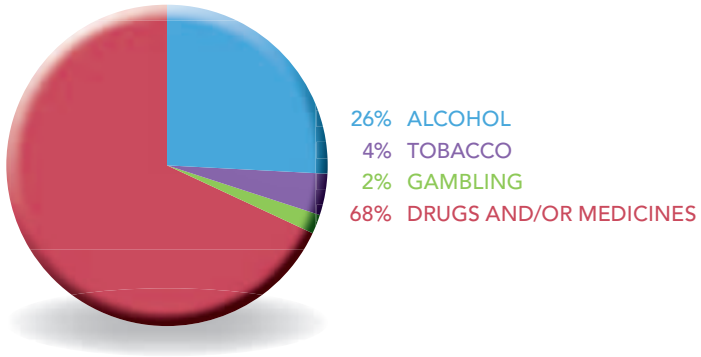
Substance Abuse Services

Care for people with pathologic addictions is provided by an integrated system that involves Health Trusts (with the pathologic Substance Abuse Services, SerT), private accredited organizations, Local Authorities, and volunteers.
These Services deal with prevention, damage reduction, diagnosis, rehabilitation treatment and social reintegration of people with drug and/or medicine abuse or pathological gambling.
A total number of 30,783 people were treated at Substance Abuse Services in 2011, a little more than in 2010 (30,186). The typology of abuse treated by SerTs included problems related to drugs and/or medicines (68% of Service's total users), alcohol (26%), tobacco (4%), and pathological gambling (2%).
Heroine confirmed to be the primary substance of abuse, involving 68.8% of drug abusers cared at SerTs.
The number of people who refer to Substance Abuse Services for cocaine addiction as primary or secondary substance of abuse numbered 3,634 at 31.12.2011 (3,495 in 2010, 3,882 in 2009).

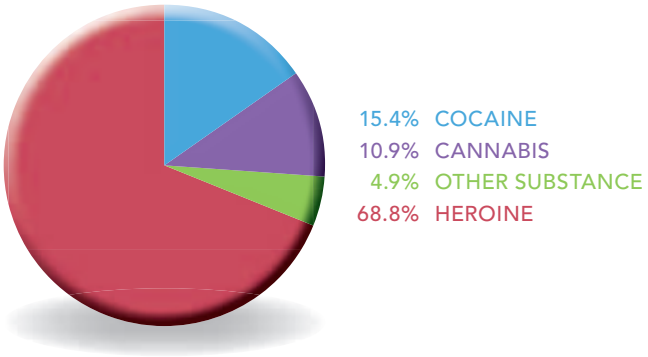
People treated at Substance Abuse Services - Period 2003-2011



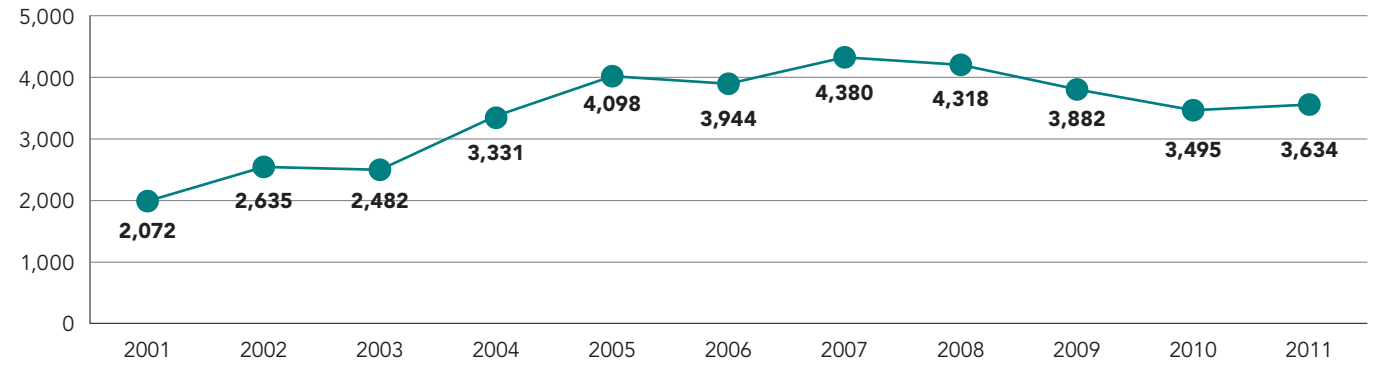
Users treated at SerT by type of pathologic addiction/problem - % values - Year 2011



Drug addicts treated at SerT by primary substance of abuse - % values - Year 2011



Users treated at SerT for cocaine addiction as primary or secondary substance of abuse Period 2001-2011



Services for senile dementia

To support dementia Patients and their families throughout the entire course of their disease, and to favour the achievement of the best quality of life possible: this is the aim of the regional "Dementia" program, which can now count on a network of 53 Family advisory health centres and Centres for the diagnosis and care of dementia, where multidisciplinary teams (physicians, nurses, psychologist and other professionals) are involved.

These facilities are usually set within Primary Care Departments of the Local Health Trusts, and work with Local Authorities, volunteers and families.

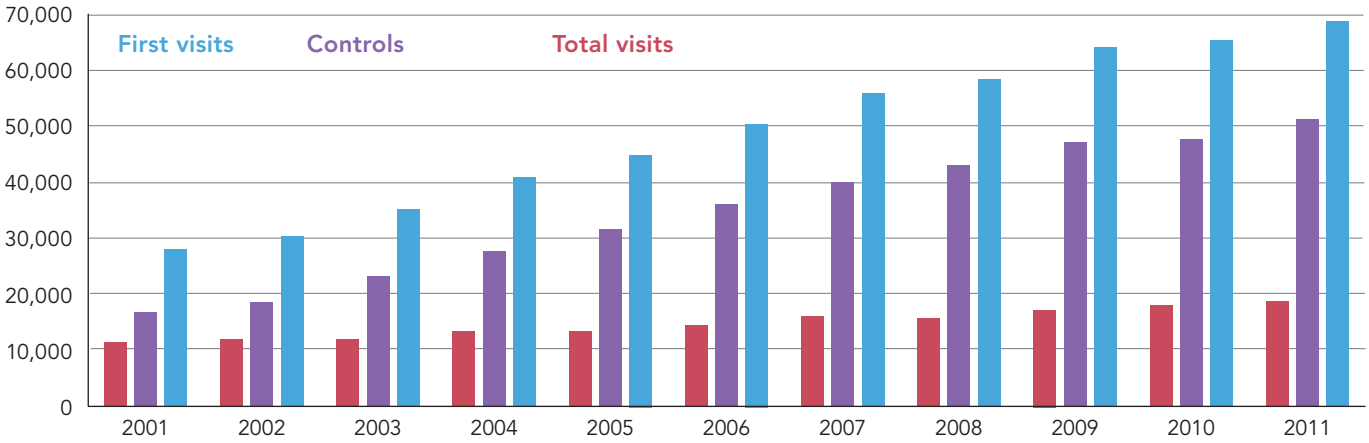
The network of services provides pharmacological intervention which delays the progress of cognitive deficit, Patient and family-oriented programs (such as cognitive stimulation, support groups and self-help groups) specialist counselling, training, information and socialisation initiatives, other care and financial assistance (e.g. temporary "relief" care, care allowances and family assistants contributions), and initiatives which are also guaranteed through the financial support of the Regional Fund for non self-sufficient people.

In 2011 the Region realized the video "A particular day", subtitled in six foreign languages, which offers useful hints to relatives and family assistants who live with a person with dementia or behavioral disorders. The video can be seen at **http://www.youtube.com/user/videosaluter**.

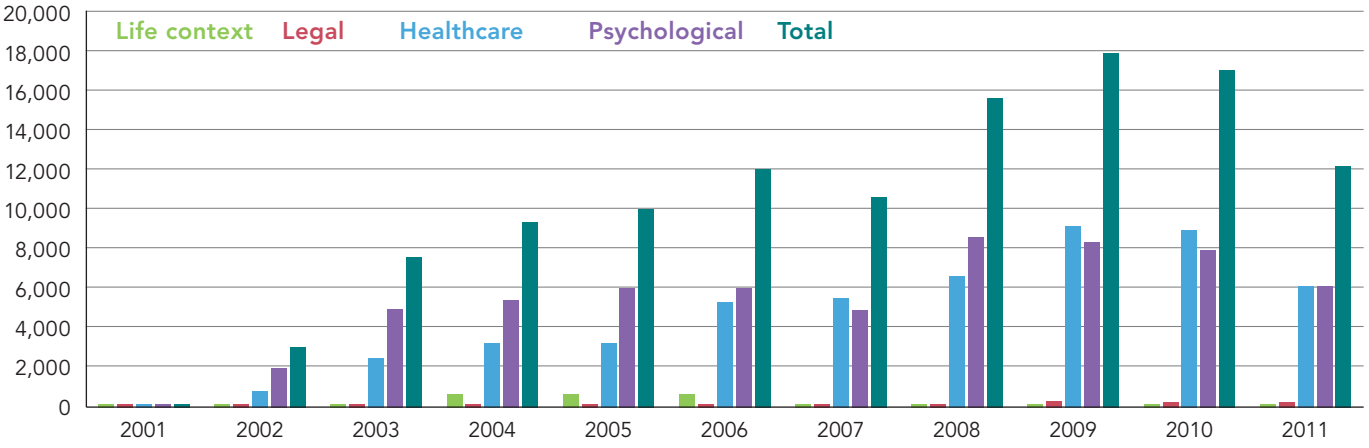
In 2011 69,358 visits were performed (65,615 in 2010); there were 18,284 new service users (18,017 in 2010) and 77% of them received community care. Relatives were offered 12,386 specialist consultations (17,098 in 2010). Some initiatives addressed to relatives and Patients were also implemented: 7,288 people were involved in information and training initiatives, support and self-help groups, and activities in the 'Alzheimer Cafes' (50 at the end of 2011; these are often run by associations of family members and provide cognitive stimulation, socialisation activities, and an opportunity for families to share their problems with others in similar situations).

The 53 Family Advisory Health Centres/Centres for the Diagnosis and Care of Dementia are distributed in the whole Region: 6 in Piacenza, 4 in Parma, 8 in Reggio Emilia, 9 in Modena, 10 in Bologna, 1 in Imola, 7 in Ferrara, 4 in Ravenna, 1 in Forlì, 2 in Cesena, and 1 in Rimini.

Visits - Period 2001-2011



Specialist consultations for family members - Period 2001-2011



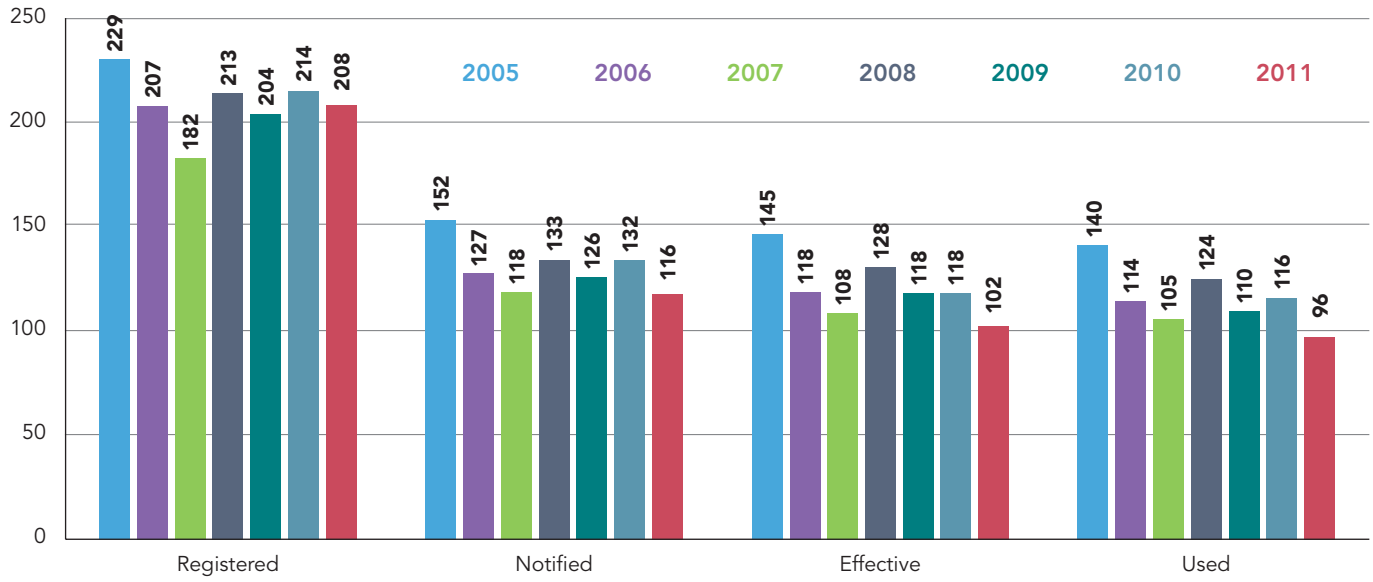
Donations and transplants of organs, tissues, cell, cord blood

Donations

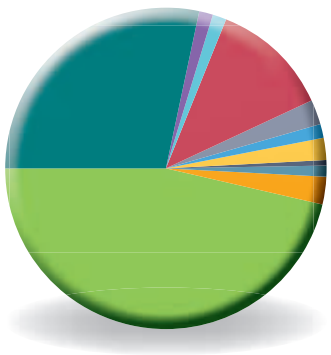
In 2011 in Emilia-Romagna the number of effective donors was 96, 21.8 per million population (18.4 in Italy). The average age of used donors was 58.4 years.
292 organs were removed (kidney, heart, liver, pancreas, lung, intestine), 260 were transplanted (89%). Oppositions to donations were 28.4% (the national average is 28.3%), mostly from people in the 55-65 year age group. The decrease in donations registered in 2011 (in 2010 they were 26.7 per million population) is due to the decrease in the number of people dying because of accident traumas, but also to the great number of potential donors who are not eligible because of concomitant severe pathologies.

The regional network is involved to maximise the opportunities of donation and Health Trusts are committed to further improve their efficiency. It is also fundamental to make citizens aware of the importance of donation: the regional campaign "A conscious choice" is going on with the coordination of the Emilia-Romagna Transplant Centre and the cooperation of Health Trusts, volunteers and Local Authorities.
In 2011, 1,191 corneas, 175,635 cm^2 of skin, 122 blood vessels, 32 heart valves, 1,198 osteotendinous segments were donated in the Region; 304 units of cord blood were collected and certified by the Regional Bank, to be used for children with leukaemia in the whole world.

Donors (registered, notified, effective, used) - Period 2005-2011



Potential donors registered in Emilia-Romagna - Year 2011



28.4% OPPOSITIONS
1.4% OPPOSITIONS BY PUBLIC PROSECUTOR'S OFFICE
1.4% CARDIAC ARREST
12% POST-ANAMNESIS INELIGIBILITY
2.4% PRE-TRANSPLANT INELIGIBILITY
1.4% SUITABLE WHEN ENTERED THEATRE AND NOT REMOVED DUE TO DONOR'S PRE-TRANSPLANT INELIGIBILITY
2.4% SUITABLE WHEN ENTERED THEATRE AND NOT REMOVED DUE TO ORGAN PATHOLOGY
0.5% SUITABLE, DID NOT ENTER THEATRE BECAUSE OF UNAVAILABILITY OF COMPATIBLE RECIPIENT
1% EFFECTIVE DONORS NOT USED BECAUSE OF ORGAN INELIGIBILITY
2.9% EFFECTIVE DONORS NOT USED BECAUSE OF THEIR PRE-TRANSPLANT INELIGIBILITY
46.2% USED

Transplants

In 2011, 267 people received transplants in Emilia-Romagna and 297 organs were used.
Tissue transplants included 476 corneas and 57 scleras (eye white membrane), 9 heart valves, 67 blood vessels, 569 bone segments and 1,896 processed bones; 77 people received 108 skin segments, 42 Patients underwent de-epidermized dermis transplant and 5 received decellularized dermis transplant; 109 allogenic transplants (from living donor or from regional, national or international registry) of hematopoietic stem cells (from bone marrow, blood or cord blood); 384 autologous bone marrow transplants (cells from the same Patient).
In 2011, 9 units of cord blood (donated during birth) were used: 3 in Italian haematology centres, 4 in European centres, 1 in the United States and 1 in South America.

Transplant activity in Emilia-Romagna is at excellent levels: the number of transplants per million inhabitants in 2011 was 7.3 for heart transplants (4.6 at national level), much higher also in comparison to Germany (4.8 in 2010), France (5.8 in 2010) and Spain (5.2 in 2010). For liver and kidney the situation is similar: in 2011 the number of liver transplants per million inhabitants in Emilia-Romagna was 23.4 (16.9 in Italy; in 2010, 15.7 in Germany, 16.9 in France, 20.7 in Spain); the number of kidney transplants in Emilia-Romagna was 26.6 per million inhabitants (25.5 in Italy; in 2010, 27.8 in Germany, 27.4 in England, 42.2 in Spain).

Organ transplant centres

The Emilia-Romagna organ transplant centres are located at the University Hospital Trust of Bologna for kidney, liver, heart, intestine, multivisceral, pancreas (alone and combined in multivisceral transplant); at the University Hospital Trust of Modena for kidney, liver, intestine, multivisceral; at the University Hospital Trust of Parma for kidney and pancreas (alone and combined with kidney).

Waiting times and survival rates

In Emilia-Romagna active unified waiting lists for kidney and liver transplants are available. Patients on waiting lists as of 31st December 2011 numbered 1,237 for kidney transplant, 53 for heart transplant, 248 for kidney transplant, 21 for intestine transplant, 6 for lung transplant, 5 for combined heart and lung transplant, 5 for pancreas transplant.
Waiting times in 2011 were little longer than 3 years for kidney transplant (2.8 years at national level), little more than 1 year for heart transplant (2.4 at national level), about 2 years for liver transplant (in line with the national figure), about 1.5 years for lung transplant and for combined heart and lung transplant (little more than 2 years at national level).
Survival rates in Emilia-Romagna are: for kidney transplants, nearly 98% after 1 year from the operation (about 97% at national level); for heart transplant, 92.5% after 1 year from the operation (Italian average 83.8%); for liver transplant, more than 84% after 1 year from the operation (in line with the national figure).

For more information: **http://www.saluter.it/trapianti**

Transplants of organs, cells and tissues in Emilia-Romagna - Year 2011

Kidney	**136**
Heart	**32**
Liver	**105**
Intestine	**2**
Multivisceral	**1**
Lung	**5**
Corneas	**476**
Scleras	**57**

Heart valves	**9**
Blood vessels	**67**
Skin	**157**
Allogenic transplant (hematopoietic stem cells)	**109**
Autologous bone marrow	**384**
Bone segments	**569**
Processed bone	**1,896**

Transplant activity in Emilia-Romagna, Italy, Germany, France, England, Spain (number of transplants per million inhabitants) - Year 2011

	Emilia-Romagna 2011	Italy 2011	Germany 2010 (*)	France 2010 (*)	England 2010 (*)	Spain 2010 (*)
Kidney transplant	26.6	25.5	27.8	40.3	27.4	42.2
Heart transplant	7.3	4.6	4.8	5.8	2.0	5.2
Liver transplant	23.4	16.9	15.7	16.9	11.5	20.7
Lung transplant	1.1	2.0	3.6	4.1	2.6	5.0
Pancreas transplant	0.9	1.0	2.0	1.5	3.2	2.0
Intestine transplant	0.7	0.1	0.1	0.1	0.3	0.1

(*) Last available figure.

Blood collection and consumption

In 2011 in Emilia-Romagna 254,000 whole blood units were collected, with a little increase of 0.2% on 2010 (253,500 units collected). On the contrary, blood consumption shows a little decrease: in 2011 244,637 blood units were used, -0.99% in comparison to 2010 (247,084 units used).
Beyond its own needs, Emilia-Romagna could also contribute in favour of Regions that could not meet their requirements: 4,013 blood units were transferred to needy Regions in 2011, an increase of 14.49% compared to 2010 (3,505).
Also the number of donors (more than 160,000 registered donors) has increased: in 2011 about 20 thousand new donors were registered in the region.

To promote blood donation, the Region and the voluntary associations Avis and Fidas have been involved for years in awareness campaigns addressed to specific groups of the population, in particular young people.
The Emilia-Romagna blood services are also involved in a quality project, to concentrate blood and plasma processing centres at a Vast Area level, namely North Emilia, Central Emilia and Romagna (for subsequent transfer to regional services and other Regions). Processing centres have already been unified in Vast Area Romagna at the Officina Trasfusionale di Pievesestina (Transfusion Centre).

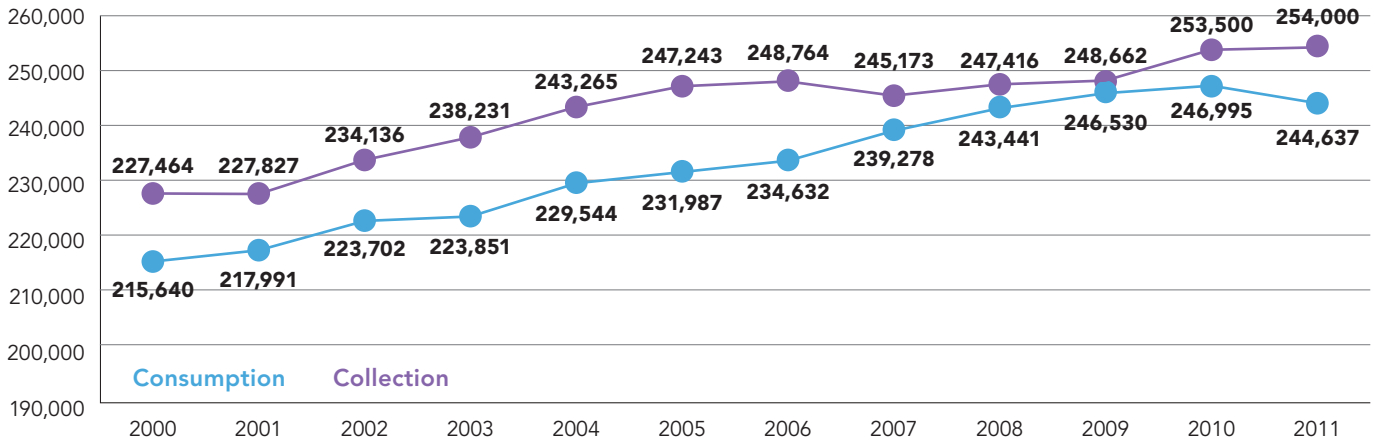
For more information: **http://www.saluter.it/sangue**

Blood collection and consumption (red units) - Comparison period 2010-2011

Programs	Collection				Consumption			
	2011	2010	% difference 2010-2011	Goal for 2011 collection	2011	2010	% difference 2010-2011	Goal for 2011 consumption
Piacenza	15,568	15,780	-1.34%	15,600	13,586	13,369	1.62%	13,500
Parma	29,792	30,199	-1.35%	30,000	27,168	27,455	-1.05%	28,500
Reggio Emilia	23,689	23,331	1.53%	24,000	19,879	18,834	5.55%	19,000
Modena	37,008	36,448	1.54%	36,000	32,382	32,955	-1.74%	33,000
Bologna	62,907	62,756	0.24%	63,500	68,757	71,231	-3.47%	70,500
Ferrara	22,526	22,649	-0.54%	22,500	23,153	23,380	-0.97%	23,750
O.T. Area vasta Romagna*	62,510	62,337	0.28%	63,000	59,712	59,860	-0.25%	60,000
Total	**254,000**	**253,500**	**0.20%**	**254,600**	**244,637**	**247,084**	**-0.99%**	**248,250**

(*) Vast Area Romagna Transfusion Centre.

Blood collection and consumption trend (red units) - Period 2000-2011



Blood units (red units) transferred to other Regions - Year 2011: 4,013

Screening programs for breast, cervical and colorectal cancer

Emilia-Romagna has three active screening programs: prevention and diagnosis of breast cancer (addressed to women aged 50-69 years, it offers mammography every two years; since 1st January 2010 it includes also women aged 45-49 for an annual mammography, and women aged 70-74 for a mammography every two years), cervical cancer (addressed to women aged 25-64 years, it offers pap-test every three years), colorectal cancer (addressed to men and women aged 50-69, it offers faecal occult blood test every two years).

Breast cancer screening

Since 1st January 2010 screening has been offered to all women aged between 45 and 74 years (840 thousand in total). Adhesion to invitations in women aged 50-69 (addressed to 100% of them) was very high also in 2011: 68% (60.5% at national level). 76.8% of women aged 45-49 and 100% of women aged 70-74 were also invited: adhesion rates were 70.7% and 65.3% respectively.
Result data are available for 2010: 252,512 women between 45 and 74 years had a mammography; of them, 5.1% (12,969) were called back for further assessments, and 1,045 were diagnosed with breast cancer (72% at the early stage). Conservative surgery was carried out in 87% cases. Between 1997 (starting year of the program) and 2010, screening procedures allowed to identify 14,039 women with cancer; 2,355 of these cases were in situ (still non invasive), and among those with an invasive cancer, this was at an early stage in 11,684 subjects (67.3%), an essential pre-requisite for a rapid treatment intervention.
For more information:
http://www.saluter.it/screening_femminili/

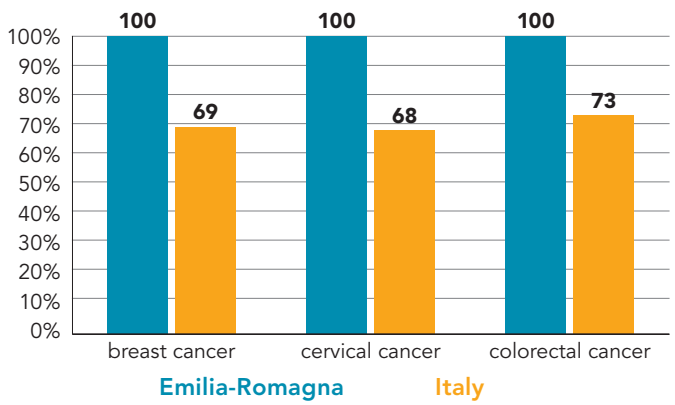
Screening program for cervical cancer

The program is addressed to women aged between 25 and 64 years (more than 1,250,000 in total). Adhesion rates to invitations (addressed to 100% of eligible women) were higher than the national average: 58.4% against 39.8%. in 2010 *(latest figure available)* 6,582 colposcopy examinations were carried out on women with abnormal pap-test results. Of these women, 1,625 (25%) were found to have low risk pre-cancerous cells (CIN1), which often recede spontaneously; 990 (15%) were found to have high risk pre-cancerous cells (CIN2 and CIN3) which are usually treated because of their potential to develop into invasive forms, even though they could recede spontaneously; 35 invasive cancers were detected, 46% of which were micro-invasive.
Between 1997 (starting year of the program) and 2010, screening procedures allowed to detect 11,631 women with pre-cancerous cells and 670 with invasive cancers (36% of which were micro-invasive cancers, therefore with a 100% probability of being cured). Treatment of pre-cancerous cells prevented them from becoming invasive cancers (which occurs in approximately 25-30% cases) in about 3,100 women.
For more information:
http://www.saluter.it/screening_femminili/

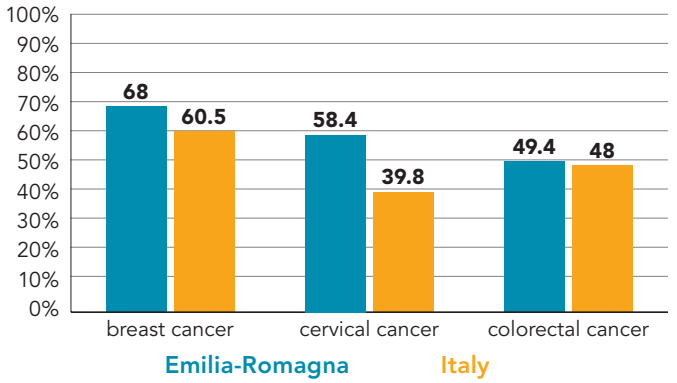
Screening program for colorectal cancer

The program is addressed to men and women between 50 and 69 years of age (approximately 1,100,100 in total). Adhesion rated to invitations (addressed to 100% of the eligible population) were 49.4% in 2011 (national average 48%). Among the 286,829 people who had faecal occult blood test in 2010 *(latest figure available)*, an average of 4.2% of the total were positive (the positive results increase with age and are more frequent in men in all age groups). The result of the colonoscopy examination in the 9,764 people who were found to be positive after the test detected high risk polyps in 28% people, and a colorectal cancer in 4%. Between 2005 (starting year of the program) and 2010, through the screening program a malignant tumour was detected in 3,103 people, 56% in an early stage and 24% in an advanced stage. Before the screening was started, regional statistics reported 51% of people with cancer in the advanced stage and only 20% in the early stage. The removal of high risk polyps (adenomas), that were found in 17,526 people during the period considered, reduced the onset of malignant tumours.
For more information:
http://www.saluter.it/colon/

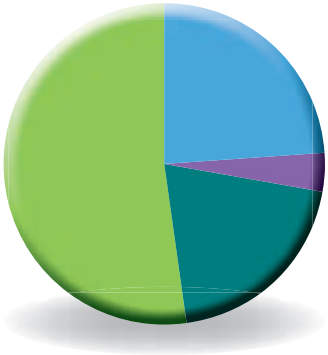
Screening for breast, cervical and colorectal cancer. Population invited as of 31/12/2011: Emilia-Romagna and Italy - % values



Screening for breast, cervical and colorectal cancer. Adhesion rate to invitations: Emilia-Romagna and Italy - % values



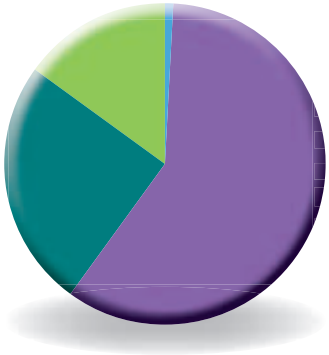
Breast cancer screening: stage of the 1,499 tumours detected in 2010 (*)



24% ADVANCED STAGE
4% UNKNOWN STAGE
20% IN SITU
52% EARLY STAGE

(*) Latest figure available.

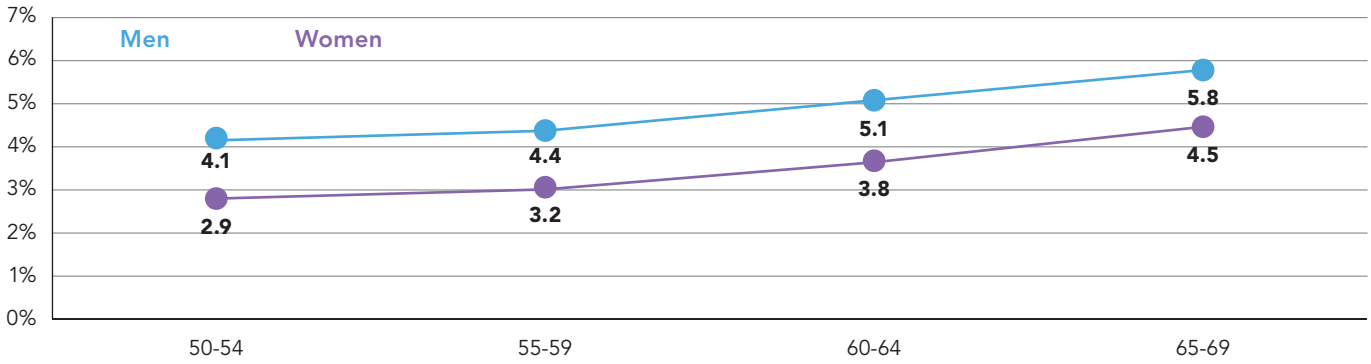
Cervical cancer screening: colposcopy results in the 6,582 examined women in 2010 (*)



1% INVASIVE CANCER
59% NORMAL/NEGATIVE
25% LOW RISK PRE-CANCEROUS CELLS (CIN1)
15% HIGH RISK PRE-CANCEROUS CELLS (CIN2 + CIN3)

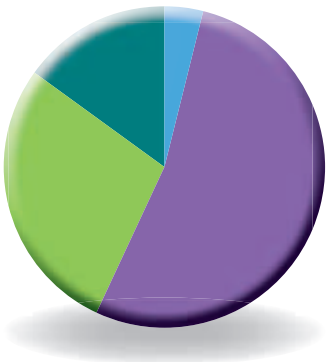
(*) Latest figure available.

Colorectal cancer screening: % positive result of faecal occult blood test, by age groups and gender - Year 2010 (*)



(*) Latest figure available.

Colorectal cancer screening: colonoscopy results in the 9,764 people examined in 2010 (*)



4% MALIGNANT TUMOUR
53% NO LESIONS
15% LOW RISK POLYPS
28% HIGH RISK POLYPS

(*) Latest figure available.

PASSI national surveillance system: access to tests included in screening programs

The PASSI (Progresses for health in Italian Health Trusts) surveillance system is based on sample surveys on people between 18 and 64 years of age. It involves all Italian Regions; the adhesion rate is 85% of target population, as in Lombardia, Calabria and Sardegna adhesion is not yet complete.
Access to tests for cancer prevention is among the studied aspects, considering both screening programs and voluntary tests, also in relation to citizenship and education level. Data underline the importance of programmed screening examinations: when actively invited through the letter by the Health Trust, more disadvantaged people participate more and therefore screening programs can reduce inequalities and differences in accessing health services.
For mammography and pap-test, PASSI data refer to surveys conducted in the period 2007-2010; for faecal occult blood test data refer only to 2010, as at national level access to this test is not yet stable, even though increasing over years.

Breast cancer screening

PASSI reveals that among women aged 50-69 years (the "traditional" age group addressed by the program), at national level 70% of them has had a mammography in the recommended times (2 years), either within the program or in other ways; the value reaches 82% in Emilia-Romagna.
According to PASSI estimates (using the prescription payment as indicator), 20% and 12% mammographies respectively at national and regional level were done outside the screening program.
Considering data on the basis of citizenship, at national level 68% Italian women regularly have mammography versus 57% foreign women; in Emilia-Romagna, the same difference can be found but with higher access rates: respectively 83% Italian and 68% foreign women.
As for education level, the difference in access to mammography is not significant in those Regions where screening programs are already active; in Regions with no screening programs, the regular use of mammography tests increases with higher education levels.

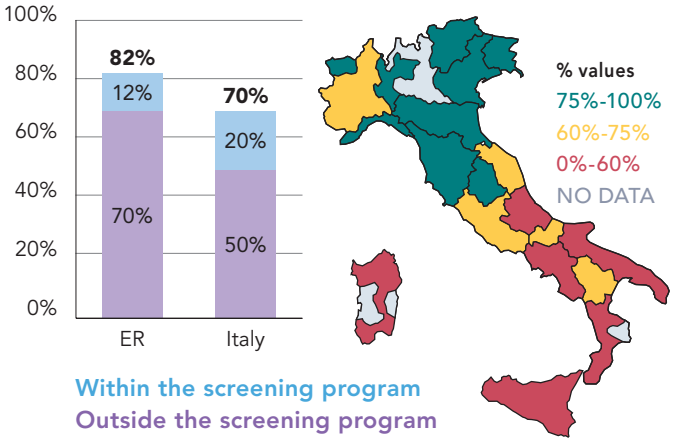
Screening program for cervical cancer

PASSI registers a national average of adhesion to colposcopy examinations (among Italian and foreign women) amounting to 76%; in Emilia-Romagna the average adhesion rate is 86%. According to PASSI estimates (using the prescription payment as indicator), 38% and 27% colposcopies respectively at national and regional level were done outside the screening program.
Considering data on the basis of citizenship, at national level 75% Italian women declare to regularly have colposcopy versus 67% foreign women; the same difference can be found in Emilia-Romagna: 87% for Italian women and 73% foreigners. Among foreign women living in Emilia-Romagna, only 12% declare to have paid for the examination; the national figure is 28%.

Screening program for colorectal cancer

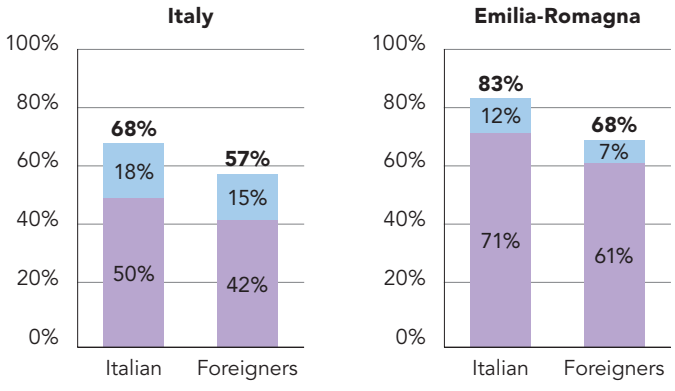
At national level, 37% population aged 50-69 years declared to have undergone an examination (faecal occult blood test or colonscopy) within recommended times; the Emilia-Romagna figure is 68%.
Considering data on the basis of citizenship, at national level 30% Italian people and 24% foreign people regularly have faecal occult blood test every two years as recommended; in Emilia-Romagna the values are respectively 64% and 41%.
Both at regional and national level, foreign people undergo the test nearly only within screening programs: it is therefore very important to spread these programs, as they can reduce inequities in accessing services.

Women aged 50-69 years who declared to have had mammography within the last 2 years



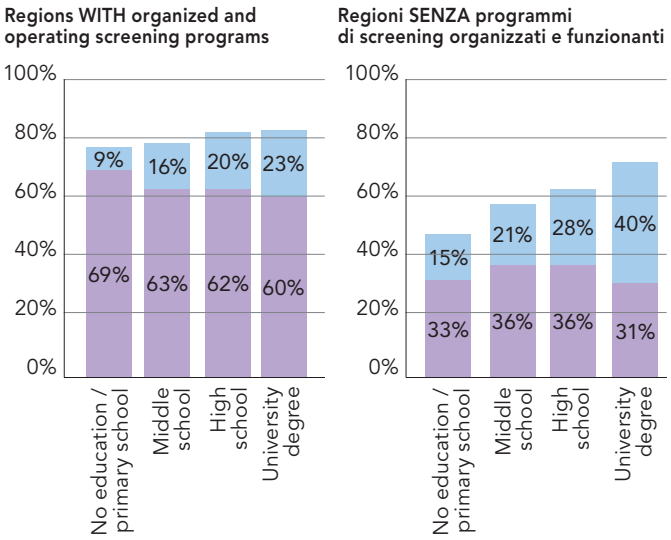
Source: PASSI National Report 2007-2010

Women who had mammography within or outside the screening program in the last 2 years, per citizenship



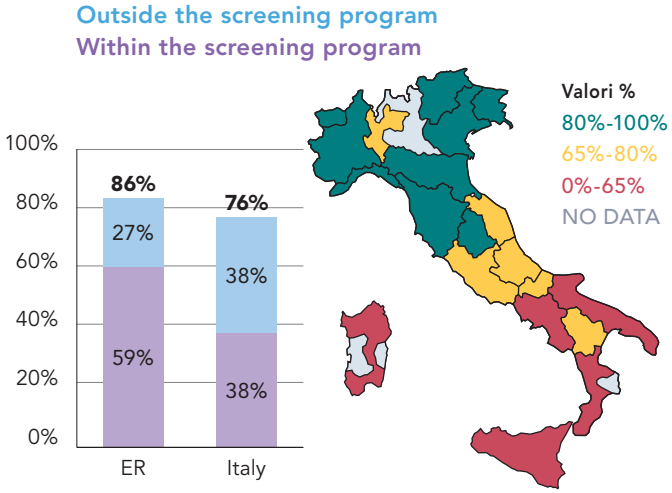
Source: PASSI National Report 2007-2010

Italian women who had mammography in Regions with or without screening programs in the last 2 years, per education level



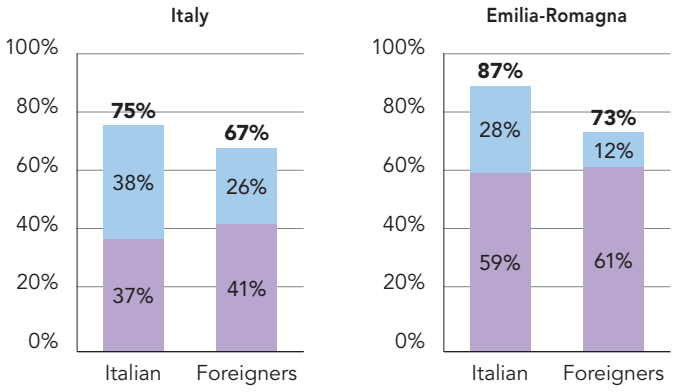
Source: PASSI National Report 2007-2010

Women aged 25-64 years who declared to have had colposcopy within the last 3 years



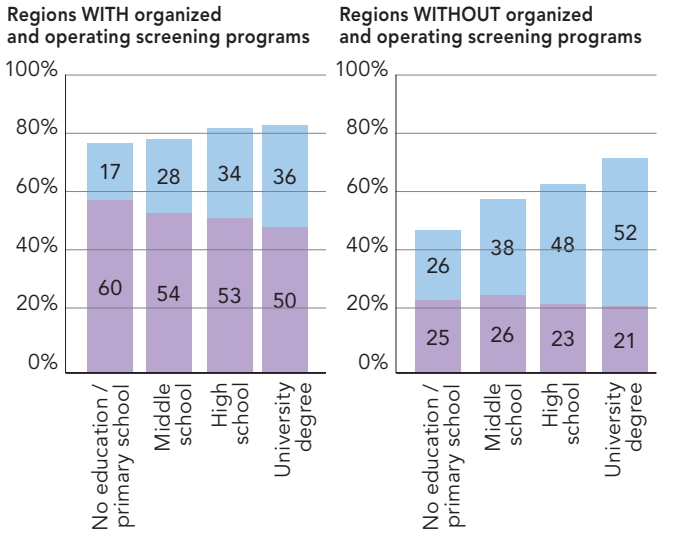
Source: PASSI National Report 2007-2010

Women who had colposcopy within or outside the screening program in the last 3 years, per citizenship



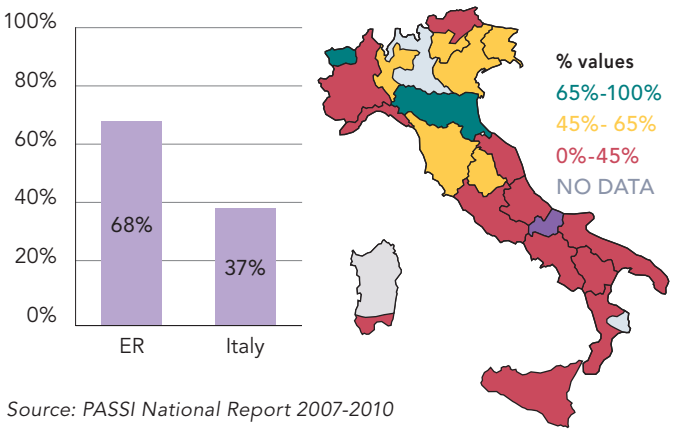
Source: PASSI National Report 2007-2010

Italian women who had colposcopy in Regions with or without screening programs in the last 3 years, per education level



Source: PASSI National Report 2007-2010

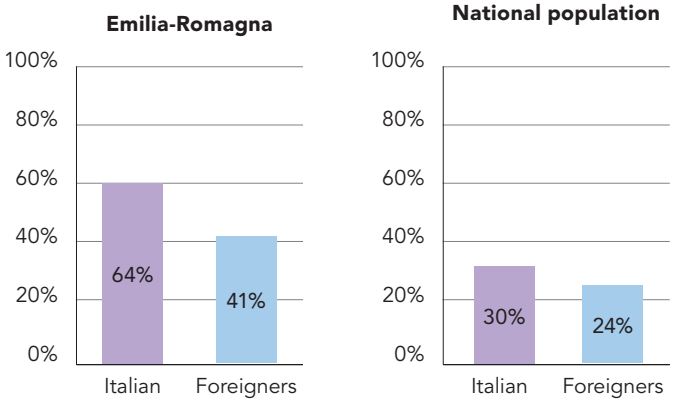
Women aged 50-69 years who declared to have had an examination for colorectal cancer* prevention in recommended times



Source: PASSI National Report 2007-2010

* *Faecal occult blood test for people aged 50-69 in the last two years, or colonscopy/rectal sigmoidoscopy in the last five years*

Women and men who had faecal occult blood test in the last 2 years, per citizenship



Source: PASSI National Report 2007-2010

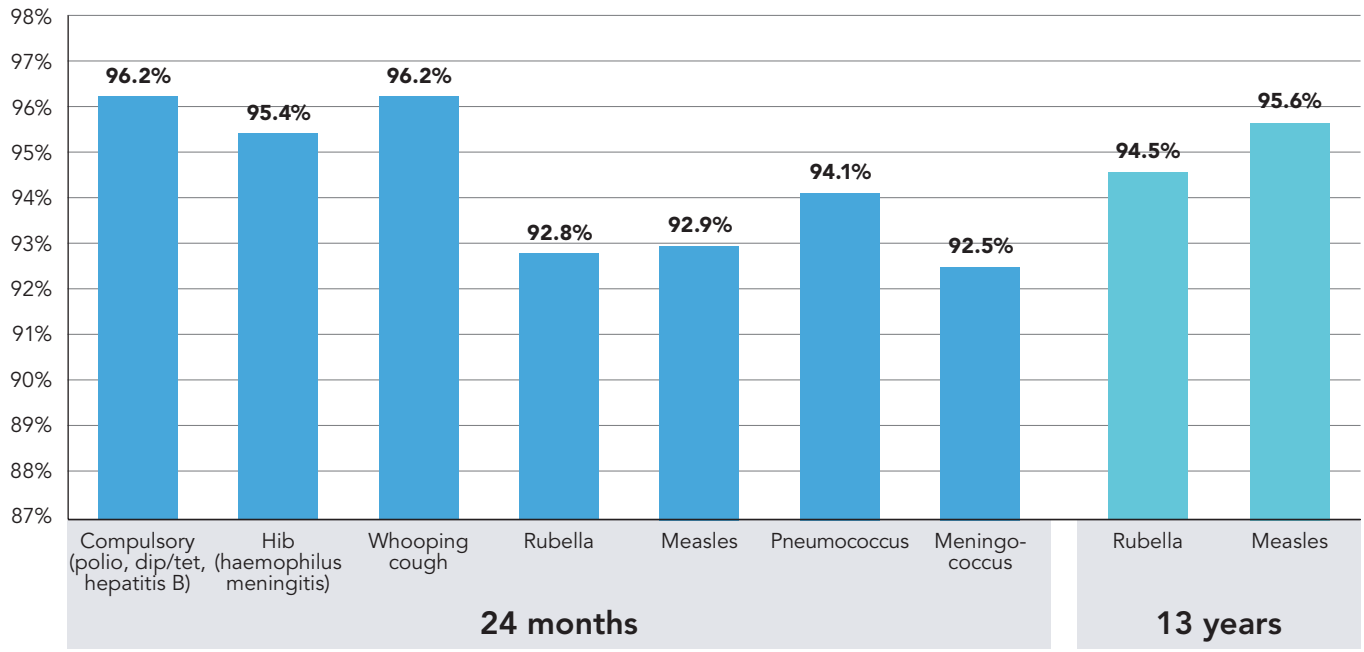
Vaccinations

With the State-Regions Agreement in February 2012, the new National Plan for Vaccination Prevention was approved. It represents a useful operational support to guarantee the right of efficacious and safe vaccinations for everyone in the whole Country. In particular, the Plan aims to level at national level the offer of pneumococcal and meningococcal vaccinations and the vaccination against human papilloma virus, as it was very dissimilar in the different Regions; Emilia-Romagna already offered these vaccinations with the timetable then adopted at Italian level.
Emilia-Romagna Region has always been committed to pursuing vaccination programs consistent with the national guidelines and included in the wider framework of infectious diseases transmission control. These programs are based on epidemiological data, on proven efficacy and safety evidences, in order ensure the widest vaccine supply, at the safest and most effective times. The objective is also to tackle inequality through preventative action against diseases which are most prevalent among the most disadvantaged groups of the population, ensuring equal access and opportunity through the active provision of a vaccination program. The commitment to maintaining the highest standards of quality in the vaccination process, professionalism of healthcare personnel, and integration with paediatricians and general practice physicians is ongoing.
In 2012 a survey will be conducted to study users' perceived quality.

Vaccinations in childhood and adolescence

Emilia-Romagna has consistently exceeded the national objective for all vaccinations scheduled in the vaccination timetable for years, even if last year registered a slight drop for all vaccinations. All the vaccinations listed were offered free of charge.
For vaccinations considered as compulsory in the first 24 months of life i.e. poliomyelitis, diphtheria, tetanus and hepatitis B, the coverage rate in 2011 was 96.2% (96.5% in 2010). For vaccinations which are strongly recommended in the first 24 months of life, the coverage rate in 2011 was 95.4% for haemophilus meningitis (96% in 2010), 96.2% for whooping cough (96.4% in 2010); 94.1% for the anti-pneumococcal vaccine (94.6% in 2010) and 92.5% for the anti-meningococcal vaccine (92.3% in 2010). The measles vaccine (for 24 months old children) registered a coverage rate of 92.9% (the same as in 2010, slightly lower with respect to 2009 (93.7%); at 7 years of age the rate exceeds the national objective of 95%, necessary to eradicate the disease. Vaccination against Rubella, which is recommended at 13 years of age, reached 94.5%.
Thanks to this wide vaccination coverage, many diseases were reduced or nearly eradicated. The thousand cases of measles, parotitis, Rubella and whooping cough in the 80s are now reduced to a small number in the last years; after the introduction of the vaccine in 2006, pneumococcal meningitis has been reduced by 55% cases, and no deaths are registered in the 0-4 year age group; for meningococcal C meningitis, no cases in the 0-4 year age group are registered, and in the other age groups the frequency is highly decreasing.

Vaccinations in childhood and adolescence - % values - Year 2011



Vaccination against human papilloma virus (HPV) types 16 and 18

The human papilloma virus causes the most common sexually transmitted infection, which is highly widespread especially among young women. HPV serotypes 16 and 18 are the most dangerous ones as they can cause, even if only in rare cases, cervical cells alterations that can evolve in cancer, if not promptly treated. The free of charge vaccination program against HPV types 16 and 18, addressed to adolescents in their twelfth year of life, has been fully working in Emilia-Romagna since March 2008, in all other Regions in line with national guidelines. Protection against the virus before the onset of sexual activity is essential.
In 2011 invitation to all the girls born in 1999 was completed and all the girls born in 2000 were invited (18,785 in the whole region).
As of 31/12/2011 vaccination coverage rate for girls born in 1997 (regional average) was 73.9%, while it was 72.7% for girls born in 1998, which again was the regional average; the coverage provisional rate for girls born in 1999 is 66.8%; a little but constant increase in adhesion can be seen.
Even though it is above the national average (equivalent to 65% for girls born in 1997, 62.4% for girls born in 1998 and 51.7% for girls born in 1999), this level of coverage could be improved, and the healthcare service is committed to achieving this.
Girls born from 1996 onwards (the year when use of the vaccine was authorised) are entitled to receive free of charge vaccination until they turn 18. The regional program offers also to girls (born before 1996) aged up to 25 years the possibility to be vaccinated in clinics of the Healthcare Service at a reduced cost, equivalent to the cost incurred by the Healthcare Service for the purchase of the vaccine plus the cost of the injection.

HPV vaccination coverage for cohorts born in 1999-1998-1997 - data as of 31/12/2011

Local Health Trust	1999 cohort % vaccinated girls with 3 doses	1998 cohort % vaccinated girls with 3 doses	1997 cohort % vaccinated girls with 3 doses
Local Health Trust of Piacenza	66.3	73.4	83.6
Local Health Trust of Parma	59.7	65.3	64.2
Local Health Trust of Reggio Emilia	71.6	80.0	77.6
Local Health Trust of Modena	75.2	77.6	78.5
Local Health Trust of Bologna	63.7	66.8	69.6
Local Health Trust of Imola	81.2	87.0	92.4
Local Health Trust of Ferrara	58.9	76.9	76.1
Local Health Trust of Ravenna	66.8	78.0	80.4
Local Health Trust of Forlì	75.3	80.7	78.3
Local Health Trust of Cesena	69.3	64.8	66.9
Local Health Trust of Rimini	53.8	57.2	58.0
Regional total	**66.8**	**72.7**	**73.9**

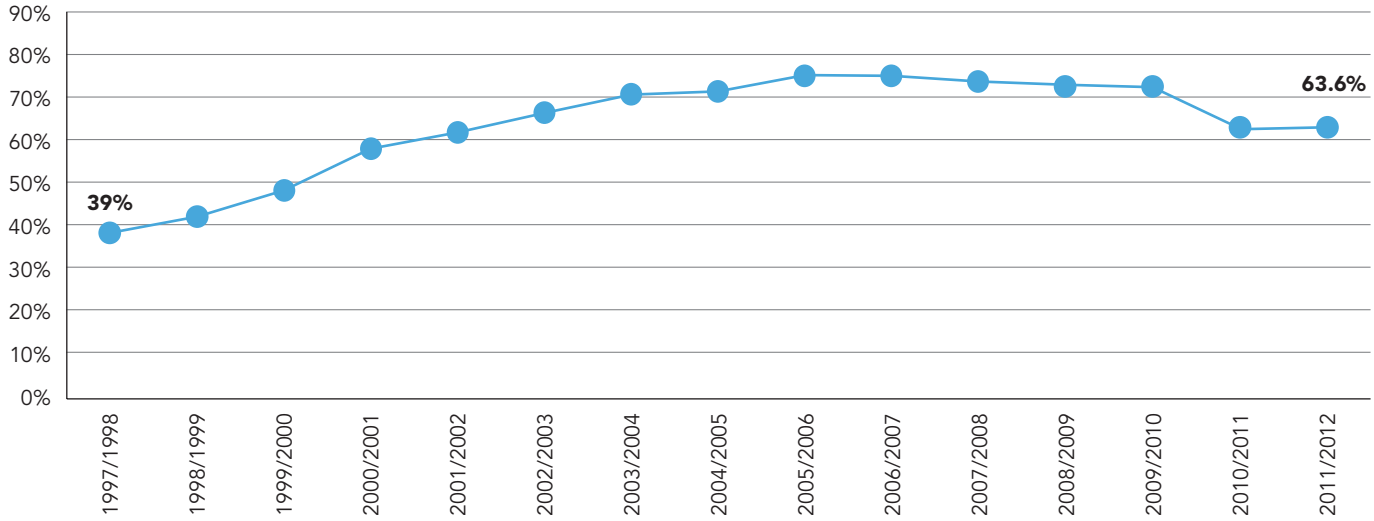
Influenza vaccination

These vaccinations are free of charge and are directed to the over 65s, adults and children with chronic diseases and therefore more exposed to complications, and people that need protection against the influenza virus infection because of their professional activity (healthcare personnel, people working with the public and blood donors).

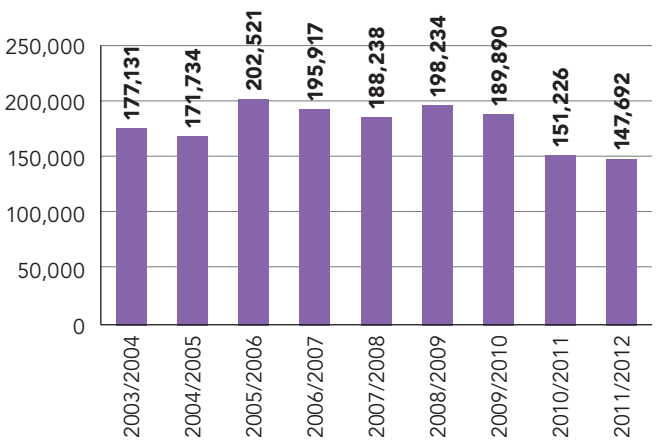
The vaccine coverage rate for people aged over 65 years registered a considerable drop in the 2010-2011 campaign, while in the following 2011-2012 campaign it was stable, 638,835 vaccinated, 63.6% of the total (63.3% in the 2010-2011 campaign, but 73% in the 2009-2010 campaign). The adhesion to vaccination by people with chronic diseases registered a new decrease (147,692 against 151,226 in 2010-2011); also vaccination among healthcare personnel registered the same downward trend: 21.3% of the total, against 24.3% of the previous campaign *(2010-2011 data differ from those published last year because of updates registered after the publication).*

The Regional Health Service is committed in promoting this safe and efficacious vaccination to all interested population groups, including its own workers.

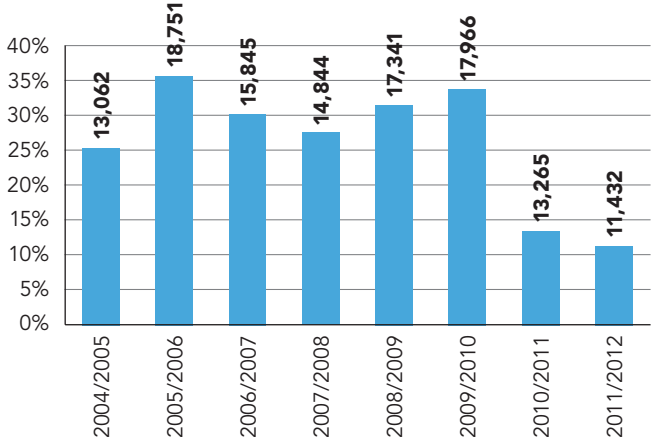
Influenza vaccination in population aged 65 and over: campaigns from 1997-1998 to 2011-2012 % values



Influenza vaccination in adults and children with chronic diseases: campaigns from 2003-2004 to 2011-2012



Influenza vaccination in healthcare workers: campaigns from 2004-2005 to 2011-2012*



* *Coverage was calculated considering as denominator all healthcare workers employed in the Regional Health Service, general physicians and paediatricians as of 31/12/2011.*

Occupational health and safety

Occupational accidents in Emilia-Romagna are constantly decreasing: in 2011, 99,713 accidents were reported to INAIL, the National Insurance Institute for Occupational Accidents (down by 6% compared with 2010 when 106,077 accidents were reported). Since 2001 the number of accidents reported decreased by 33%, falling from 148.777.
Fatal accidents in the same period fell by 50% from 168 in 2001 to 84 in 2010, when they decreased by 7.7% compared with 2010 (91 fatal accidents).
The datum is certainly positive, but it is to be considered in the general economic crisis that determines a decrease in workers number. Professional diseases are on the contrary strongly increasing: 7,153 in 2011 (6,422 in 2010), 3,933 in 2007, +45% in five years. At national level, le figure moved from 28,933 in 2007 to 46,558 in 2011.
In 2011 Emilia-Romagna was the Region with the highest number of professional diseases, followed by Tuscany (5,843) and by Lombardia (3,124, even if it is the Region with the highest number of workers).
In Emilia-Romagna, the most reported professional diseases in the industrial sector and in agriculture are arm pathologies due to overloading (2,284 in 2011) and lumbar slipped disk (571 in 2011).
All indicators show however that this increase in the number of signalled professional diseases is not due to worsen work conditions, but to specific programs promoted by Local Health Trusts to identify and remove disease causes, to favour precocious diagnosis and therapy, to implement rehabilitation interventions and correct insurance acknowledgement.

Occupational accidents reported to INAIL - Period 2010-2011

Province	Total accidents		% variation 2011/2010	Fatal accidents		% variation 2011/2010
	2010	2011		2010	2011	
Piacenza	5,872	5,441	-7.3	6	4	-33.3
Parma	10,823	10,394	-4.0	10	7	-30.0
Reggio Emilia	14,257	13,550	-5.0	7	15	114.3
Modena	17,591	16,952	-3.6	8	8	0.0
Bologna	22,594	21,346	-5.5	27	16	-40.7
Ferrara	6,268	5,825	-7.1	11	8	-27.3
Ravenna	10,305	9,678	-6.1	8	15	87.5
Forlì - Cesena	10,082	9,070	-10.0	9	6	-33.3
Rimini	8,285	7,457	-10.0	5	5	0.0
Regional total	**106,077**	**99,713**	**-6.0**	**91**	**84**	**-7.7**

Professional diseases reported to INAIL - Period 2007-2011

Province	2007	2008	2009	2010	2011
Piacenza	61	85	111	94	114
Parma	318	333	390	437	568
Reggio Emilia	702	747	866	1,065	1,232
Modena	610	627	608	665	631
Bologna	893	1,038	1,129	1,415	1,554
Ferrara	189	209	202	260	313
Ravenna	256	340	480	802	1,064
Forlì - Cesena	615	716	780	1,225	1,181
Rimini	289	340	367	459	496
Regional total	**3,933**	**4,435**	**4,933**	**6,422**	**7,153**

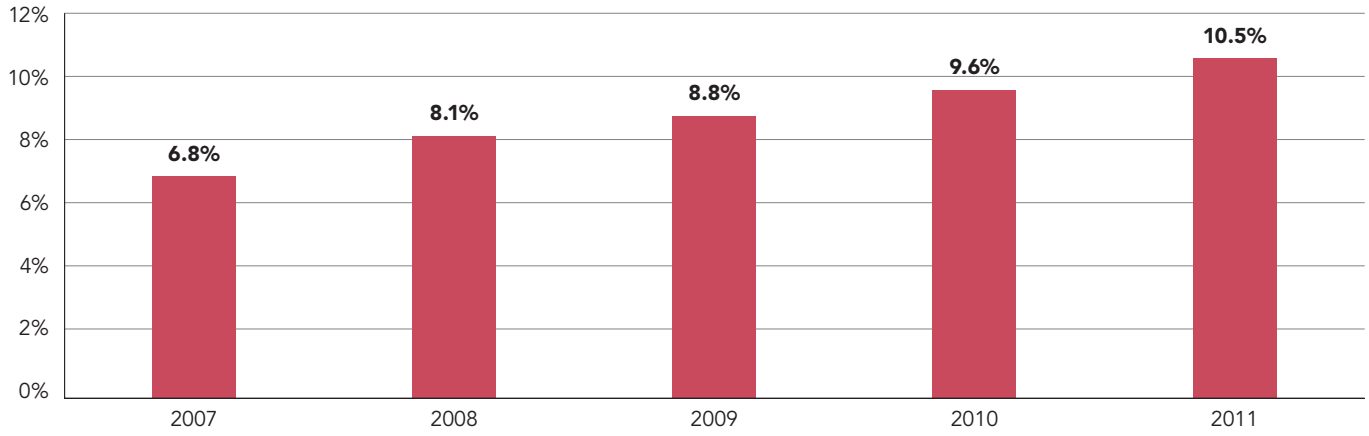
Surveillance activities by Local Health Trusts

In the period 2007-2011, as indicated in the regional program, the Occupational safety services of the Local Health Trusts have increased their surveillance activity. The slight decrease in 2011 (22,369 firms inspected, versus 22,506 in 2010) is due to the general economic crisis and the reduction in the number of companies (in 2007 15,978 firms were inspected, 17,417 in 2008, 20,568 in 2009); also in 2011 the surveillance index, that is the ratio between inspected firms and total companies, is increasing, reaching 10.5% versus 9.6% in 2010 (6.8% in 2007, 8.1% in 2010, 8.8% in 2009).

31.9% of inspected companies were reported to the Authorities for infringements of regulations on occupational safety. The sectors with the highest ratio between the number of sanctioned companies and the number of inspected companies were the textile and clothing sectors, where 49.5% companies were found to be in breach of regulations, followed by the agriculture-silviculture-fishing sector (43.7%); the sectors with the lowest ratio were public sector (11.2%) and health and social care (19.3%).

Irregularity indexes (outlined in detail in the table) should not be considered as illegality indexes in the sectors in question, as the inspected companies were not chosen with statistical criteria, but rather on the basis of specific indicators aimed at identifying the companies at highest risk of irregularity.

Surveillance trend - Ratio between inspected firms/total companies - % values - Period 2007-2011



Ratio between sanction measures and inspected firms (irregularity index) - Year 2011

Sector	Irregularity index
Textile / clothing	49.5%
Agriculture, silviculture, fishing	43.7%
Production of rubber and plastic articles	37.1%
Metal and mechanical	36.8%
Food and tobacco production	36.6%
Wood, paper and printing industry	36.2%
Transportation	33.9%
School	33.8%
Construction	31.3%
Energy, water, gas - Waste	30.4%
Hotel / catering	29.9%
Mineral extraction	29.7%
Services	29.6%
Chemical	29.5%
Production of electric appliances	27.6%
Other industries	26.8%
Information / communication services	25.7%
Trading	24.9%
Production of electronic appliances	22.6%
Health and social care	19.3%
Public	11.2%
Total regional	**31.9%**

Occupational safety in the health sector

The Regional Plan for occupational health and safety in the health sector is aimed at reducing occupational accidents and diseases and at promoting organizational wellbeing. All the Health Trusts were involved; interventions regarded 67,382 workers, all insured with INAIL as potentially exposed to occupational accidents or diseases.

In 2011 5,937 Health Trust workers suffered an accident while working, -4.3% with respect to 2010. In 34.3% cases it was a biological accident (for example, needle prick or with other cutting object, contact with biological material). The other main accident causes that determined an absence superior to 4 days (thus recognized by INAIL) were traumas due to manual handling of Patients or loads, to slipping or falling, to violence and assaults.

The total number of days of absence from work because of occupational accidents in 2011 amounted to 90,638, versus 95,020 days in 2010.

Workers' state of health and their fitness for work is regularly checked to avoid occupational diseases and to prevent any damage to health. In 2011 31,119 workers were visited (31,176 in 2010); 29,488 of them (94.7% of those visited) were judged suitable for a specific job. 1,631 workers were temporarily or definitively assigned to other jobs because of occupational pathologies.

Regional Health Service: occupational accidents - Period 2009-2011

	2009	2010	2011
Health Trusts' workers insured with INAIL	65,332	67,737	67,382
No. of non biological accidents with prognosis longer than 4 days	3,361	3,360	3,173
No. of non biological accidents with prognosis shorter than 4 days	580	788	730
No. of accidents with biological matrix	2,279	2,054	2,034
Total accidents	6,220	6,202	5,937
Total days of absence because of occupational accidents	93,079	95,020	90,638

Regional Health Service: health visits - Period 2010-2011

	2010	2011
Health Trusts' visited workers insured with INAIL	56,491	57,147
% of visited workers on the total of workers insured with INAIL	83.4%	84,8%
Workers visited in the right year	31,176	31,119
No. of workers judged fit for a specific job	29,153	29,488
% of fit workers on total visited workers	93.6%	94.7%

Food and nutritional safety

Through the Local Health Trust Veterinary and Food Hygiene & Nutrition Services, the Regional Health Service carries out inspections (audits, checks, tests, monitoring, supervision and sampling) along the entire production line for foods of animal and plant origin, with the objective of ensuring sufficient levels of safety of foods produced and consumed in the region with regard to health, in addition to safeguarding the health and wellbeing of the animals bred.

Inspections in food production plants and catering

The number of facilities that in 2011 presented irregularities in their production plants for foods of animal origin is very similar to that of 2010 (1,299 in 2011; 1,302 in 2010). A slight increase of irregularities is registered in the number of production plants for foods of plant origin (from 1,176 in 2010 to 1,257 in 2011), and in catering (from 2,994 in 2010 to 3,647 in 2011).

Food Control Plan 2010-2011

A Plan for food sampling in the 2010-2011 period was implemented, to verify microbiological parameters as defined by European Union's food safety criteria. The Plan includes the search for phytosanitary product residues and additives. Irregularities were registered mainly in production plants for foods of animal origin (71 microbiological irregularities, out of 760 samples).

Inspections for Salmonellosis

Numerous diseases in animals are subject to health surveillance programs in order to safeguard the region's livestock, the free exchange of animals and food within the European Union or with other countries and, in some cases, people's health with regard to zoonoses. Salmonellosis surveillance is part of these programs. The plan aims at reducing the prevalence of the most dangerous serotypes for human beings (S. Enteritidis and S. Typhimurium) in chicken and turkey breeding plants. In 2010 13 plants resulted to be infected, in 2011 only 2.

Search of phytosanitary residues and prohibited substances in farms and slaughterhouses

The issue of hygiene and safety of foods of animal origin concerns also control of food for animals, check on environmental pollution, surveillance on animal wellbeing and health. Some substances may unintentionally or accidentally be ingested by animals (environmental pollutants); others are intentionally given for therapeutic reasons (authorised veterinary drugs) or to increase meat production (illegal growth promoters). The National Plan on phytosanitary residues responds to European Community's surveillance indications on animal foods. The search results of illicit or prohibited substances in Emilia-Romagna in 2010 and 2011 are reassuring: in 2010 10,208 samples in farms and slaughterhouses were collected, and 31 were positive (0.3%); in 2011 11,244 samples were collected, and 38 were irregular (0.3%).

Inspections on drinking water

With regard to inspections on drinking water and 1,585 waterworks throughout the region, the plan includes the collection of samples from treatment and distribution systems, in addition to domestic supplies. In 2011 12,780 samples were analysed (1,870 inspections carried out): irregularities involved 4.5% of them.

Food production plants: facilities, inspections, irregularities - Period 2010-2011

	Facilities 2010	Inspections 2010	Facilities with irregularities 2010	Facilities 2011	Inspections 2011	Facilities with irregularities 2011
Production plants for foods of animal origin	3,339	41,312	1,302	2,439	51,467	1,299
Production plants for foods of plant origin	10,390	4,366	1,176	10,774	4,449	1,257
Catering	40,183	12,127	2,994	40,242	12,812	3,647
Total	**53,912**	**57,805**	**5,472**	**51,016**	**68,728**	**6,203**

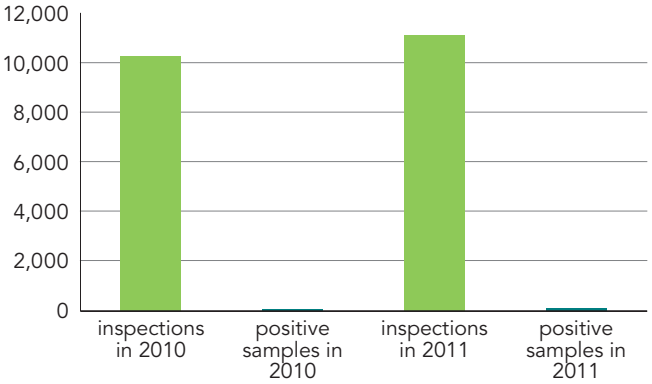
Food Control Plan - Period 2010-2011

	Inspections during production				Inspections during distribution			
	Samples	Irregularities	Samples	Irregularities	Samples	Irregularities	Samples	Irregularities
Foods of animal origin	760	71	72	1	221	26	259	4
Foods of plant origin	902	0	169	0	474	2	107	0
Foods for specific targets (for little children or diet)	57	0	110	0	182	0	136	0

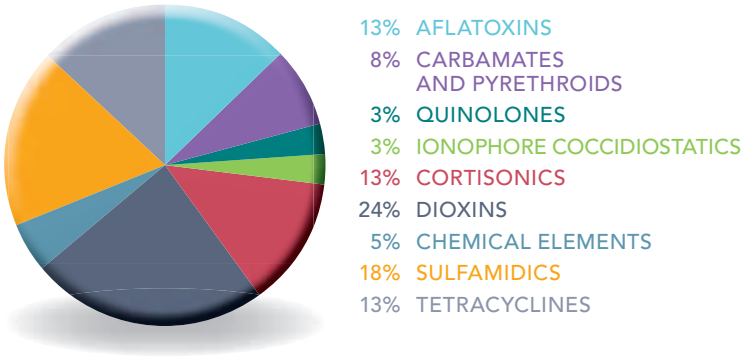
Salmonella surveillance plan for chicken and turkeys - Period 2010-2011

Type of farms	No of farms		Total number of animals		No. of positive farms	
	2010	2011	2010	2011	2010	2011
Breeder chickens	217	292	2,320,651	2,465,095	1	1
Turkeys	527	694	736,540	68,351	6	0
Laying hens	579	619	6,674,485	5,642,231	6	1
Meat chickens	939	780	1,161,384	797,913	0	0
Total	**2,262**	**2,385**	**10,893,060**	**8,973,590**	**13**	**2**

National Plan on phytosanitary residues: search of environmental pollutants and prohibited substances in farms and slaughterhouses - Period 2010-2011



National Plan on phytosanitary residues: irregular substances - % values - Year 2011



Sampling in waterworks, irregular samples - Year 2011

	No. of samples	No. of irregular samples	% irregular samples
Waterworks plant	1,952	371	19.0
Distribution plant	8,540	177	2.0
Domestic supply	2,288	36	1.6
Total	**12,780**	**584**	**4.5**

Food safety for coeliac Patients

Emilia-Romagna is witnessing a gradual increase in the number of people who are gluten-intolerant (10,933), in 2011 10.3% more compared to 2010. In recent years prevention activities for gluten intolerant individuals in the region have included training and information for employees in the food sector (98 courses were set up between 2007 and 2011, addressed to more than 2,400 people working in catering industry) and health protection. In 2011 1,584 inspections were conducted in facilities producing foods for coeliac Patients. A guide for food workers "Coeliac disease and gluten-free foods", with suggestions on preparation and distribution of this kind of food, nutritional information and correct nutritional life-style.

Telephone and online services: information, bookings and payments

Telephone and online services offered to citizens are constantly increasing. The SOLE network is among these services *(for more information see page 77)*.

The toll free number 800 033 033

In the first ten years of activity (2002-2011) the toll free number received over one million calls (1,296,165). 800 033 033 is the single Regional Health Service toll free number which can be dialled from a mobile telephone or landline anywhere in the country, and provides necessary information on where to go and how to use the social-health and health services provided by the public health service in Emilia-Romagna (where to go, how to do, what is necessary).

The service is available from 8.30 a.m. till 5.30 p.m. weekdays, and from 8.30 a.m. till 1.30 p.m. weekends and bank holidays. Information is collected in a common regional database that is regularly updated by the Regional Council Department for Health Policy (for general issues) and Health Trusts and Research Hospitals (for indications on service organization at local level). The telephone response system is based on a central call centre with suitably trained operators; it is connected to Offices for Relations with the Public of all Health Trusts and Research Hospitals and can provide free of charge detailed 'second level' responses. These referrals to other centres have decreased from nearly 30% of total calls in the first years of activity, to 11.2% in 2011 (thus demonstrating the database completeness and operators' competence.

In 2010 and 2011, the number of calls registered some peaks during periods with particular information needs, such as the vaccination campaign against the A H1Ni influenza virus in 2009, the new procedures for ticket exemption (February-May 2011), the new tickets (September-November 2011).

Toll free number of the Regional Health Service - Call trend from 2002 to 2011

Year	No. of calls received	% calls transferred for "second level" responses	Informative emergencies
2002 (*)	25,048	32.5	
2003	65,045	33.5	
2004	94,586	32.0	
2005	121,869	29.6	
2006	108,413	17.0	
2007	113,880	15.8	
2008	120,660	12.8	
2009	136,663	13.2	Emergency vaccination campaign against the A H1Ni influenza virus
2010	123,183	13.3	
2011	386,818	11.2	Emergency for new procedures for ticket exemption Emergency for the new ticket system
Total	**1,296,165**		

* *The service was started in June 2002.*

Service guide: online information

Information available from the toll free number is available to internet users in a suitable format to facilitate direct consultation. The Regional Health Service portal (**http://www.saluter.it**), and all the Health Trusts and Research Hospitals portals, include the Service Guide which provides information on all social health and healthcare services,, with all locations and methods of delivery in the whole Region.

In 2011 the guide counted 260,847 accesses in 2011 (more than tripled with respect to 2010, when they amounted to 74,195), with a daily average of 714 accesses (203 in 2010). In September 2011, when the new ticket system was started, a peak of accesses was registered.

Booking visits and tests using the 800 033 033 toll free number

In addition to telephone bookings via unified booking centres, since 2008 a service which enables the telephone booking of specialist visits and tests using the 800 033 033 toll free number is fully working. Call centre operators transfer to unified booking centres calls from citizens who have been referred for specialist visits and tests and require information on these services. The service only concerns visits and tests that can be booked by telephone, and is operational for all Health Trusts. In 2011 there were 4,472 transfers to telephone booking points; call volumes remained quite stable in the last three years, and account for 2.2% of total activity of the 800 033 033 toll free number.

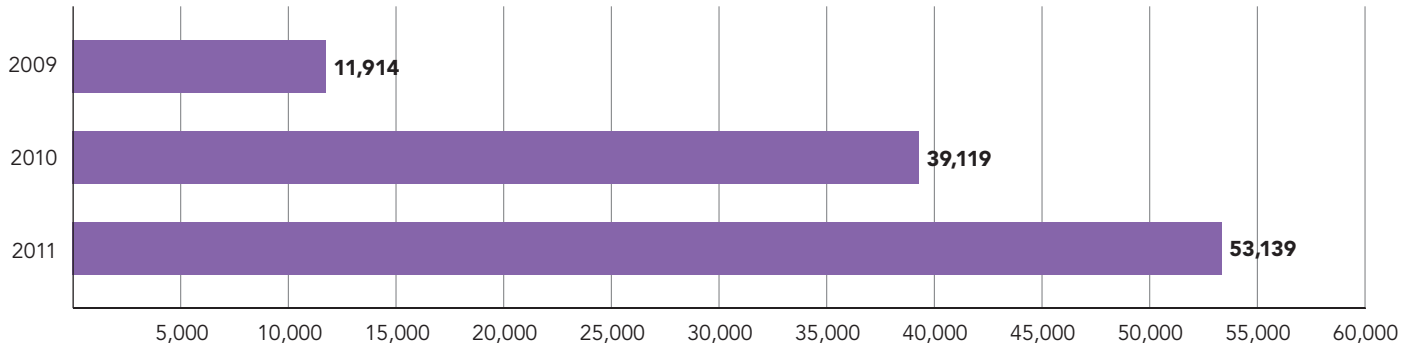
Online bookings

The Local Health Trusts of Forlì, Imola and Piacenza started an online booking service (**http://www.cupweb.it**) for specialist visits and tests prescribed on computerised Sole prescriptions, with barcodes. In the initial phase the online booking service is available for a limited number of services, but its extension to all regional Health Trusts, and to a greater number of visits and tests is planned.

Online payment for services

Since March 2011 the possibility of paying online for specialist visits and tests booked through unified booking centres is fully working. The online payment can be made by going to (**http://www.pagonlinesanita.it**): with booking details, an e-mail address, national insurance number/tax code, and one of the accepted credit or prepaid cards. Once payment has been made a receipt/invoice will be sent to users at the e-mail address provided, which will also be valid for tax purposes. In the last three years a constant increase in the use of this service is registered: from 11,914 online payments in 2009 to 53,139 payments in 2011.

Online payment for services - Period 2009-2011



Telephone and online counselling for AIDS prevention

Through the website **http://www.helpaids.it** (managed by the Health Trusts of Modena for the whole Regional Health Service), in addition to information on the disease and details on the HIV test and structures where it can be done free of charge, a counselling service (also in anonymity) is offered by a team of infectologists, psychologists, gynaecologists, obstetricians, sexologists. Answers – if with consent of the involved person – can be read online. In 2011 users referred to the service with nearly 1,400 issues; visits to the website amounted to over 198,000. Helpaids is now also available as App for iPhone and iPad: directly from the smartphone or the tablet, the "testing and counselling" outpatient structures can be searched and the counselling service can be used. Also a dedicated toll free number AIDS 800 856080 (managed by the Local Health Trust of Bologna for the whole Regional Health Service) is available: in 2011 13,151 were registered (3,098 of which asked to talk with a specialist, 863 asked to book the HIV test). 77.7% of people calling are males; the most represented age group is from 20 to 29 years (45%), followed by the 30-39 year group (30%); people over 40 years account for 18.3% of total calls.
The service is available 24 hours a day with an automatic messaging system; from 9 a.m. to 12 a.m. on Mondays and from 2 p.m. to 6 p.m. from Monday to Friday an expert answers.

Saluter, the Regional Health Service portal

All the online services listed are available on the Regional Health Service portal **(http://www.saluter.it)**, published in 2004 and fully reorganised in 2009 and 2010. The portal is organized in three sections: "Saluter oggi" ("Saluter today") offers daily updated information from the Region and the Health Trusts; "Servizi ai cittadini" ("Services to citizens") presents information on all services offered by the Regional Health Service; "Area istituzionale e operatori" ("Institutional area and professionals") describes the organization of the Regional Health Service and is dedicated to healthcare workers. In 2011 there were 2,343,952 visits (daily average 6,421); visited pages amounted to 8,816,553 (in 2010, the figures were respectively 1,368,228; daily average 3,748; 2,694,198 visited pages). The strong increase in 2011 is partly due to the new ticket system (between September and November, 3947,581 visits, 10,080 daily average, 3,601,567 pages; versus 465,033 visits, 4,947 daily average, 1,003,729 pages in the same period in 2010).

The new Sant'Anna Hospital in Cona (Ferrara)

June 14, 2012 was an important day for the University-Hospital Trust of Ferrara: the transfer of all Patients from the old Hospital in Ferrara was accomplished, towards the new hospital in Cona which represents the most important one for the whole Province and a main care, education and research structure also for the entire Regional Health Service.

The history

The realization of the new Sant'Anna Hospital was started in the 90s with the initial feasibility study; the first buildings – the so called Cona 1 – were constructed between 1996 and 2003, when the idea was to maintain two hospitals. The new project was established with an agreement between the Region and the Health Trusts of Ferrara, thus allowing the construction of Cona 2 in the 2006-2011 period.

The new Sant'Anna Hospital

The hospital is made up of 5 buildings for healthcare functions, and 3 buildings for services and technological systems; the various buildings are connected through horizontal and vertical paths, that allow to reach the structures where hospital wards and services are located.
The buildings for healthcare functions are structured with services and support spaces in the centre, and 2-bed rooms with bathroom on the sides.
A large circular tunnel in the basement allows the transport of goods and health material from service areas (kitchen, storehouses, technological plants) to hospitalization areas and outpatient departments, along different paths from those of Patients. Users can use lifts to reach wards.
Some shops and services are set in the reception building.

Architectural choices

The hospital structure is based on architectural choices aimed at integrating the Cona 1 and Cona 2 projects. Original features are found in the reception hall with lamellar wood and large glass surfaces.
The external faces are characterized by prefabricated panelling and highly technological finishing.
In the interior, floor coverings are mainly in resilient materials (PVC, linoleum, rubber) particularly fit for hospitals, system networks are hidden by false ceilings, internal and external frame are made in thermal resistant metal, colors are used to diversify functions in the various buildings.

Health technologies

Most health technologies of the new hospital in Cona come from the old hospital in Ferrara, others are new. Besides the radiological technologies of the Emergency Department, other radiological instrumentations are two nuclear magnetic resonance machines, a computed tomography machine, two X-ray systems with 4-way floating and elevating Patient table, a monoplane angiography machine, two gamma cameras, a PET/TC, two linear accelerators and a IORT (intraoperative radiation therapy).
Costs for new technologies and for those to be acquired amount to 32 million Euros.

The organizational model: hospital for care intensity

The new Hospital in Cona allows the University-Hospital Trust of Ferrara to deal with its healthcare, education and research functions. The Trust can offer nearly all medical and surgical specialties, excluded organ transplant, cardiac surgery and treatment of serious burns, that are guaranteed by other regional hub centres.
The complexity of healthcare functions required a careful evaluation to identify the better organization that could respond to the new "hospital for care intensity" model (patients grouped according not to pathology but to the level of care needed) and to the structural and functional features of the new building.
The "hospital system" in Cona can be outlined as an organised complex of structures, each hosting a specific healthcare or administrative/logistic/commercial function:

- the block of reception and commercial services, where the information office, a baby parking, the kindergarten and guest-rooms are located;
- the emergency area with all the Emergency departments, apart from the gynaecological one which is set in a specific area with its own operating theatre. This area is strictly connected to operating rooms, intensive care wards and diagnostic imaging area;
- blocks dedicated to therapy, care and hospitalization;
- the supply block which hosts support services (sterilization, wardrobe, kitchens, technological plants).

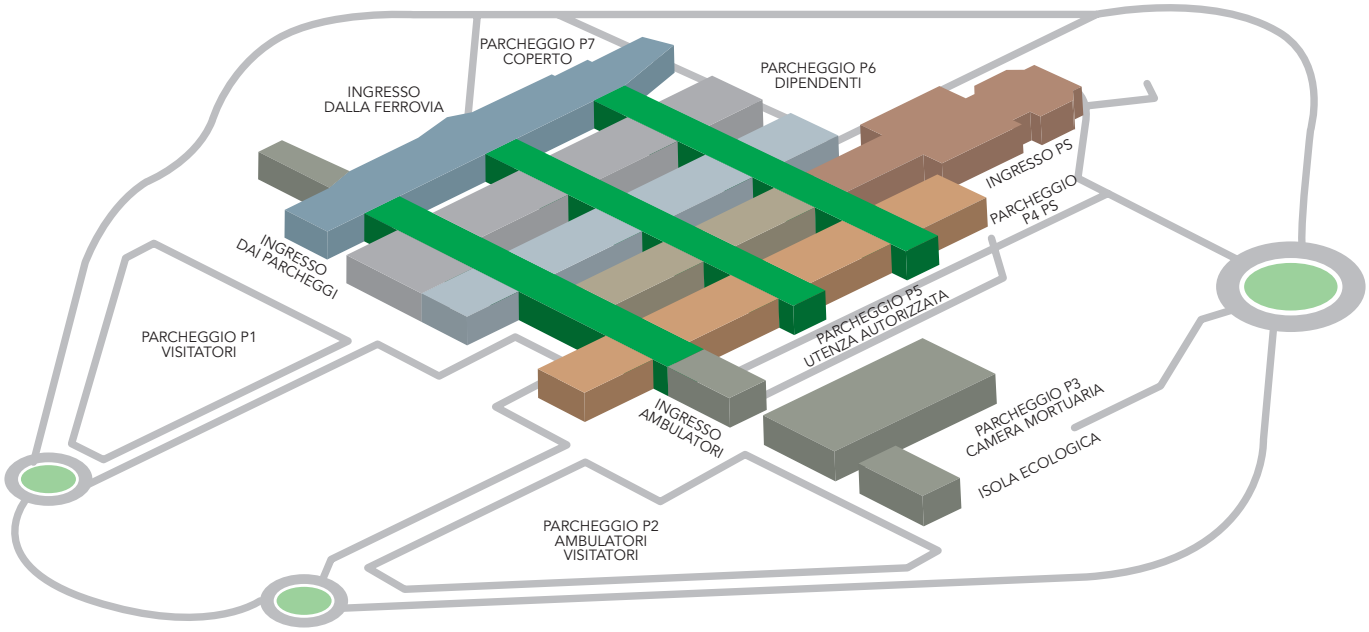
Health functions are grouped according to the same level of care intensity. This new organization model implied the unification of common areas of health functions that are homogeneous for care intensity but belonging to different Operating Units.

Dimensions and costs

The new Hospital in Cona covers 186,000 square meters and counts 800 beds (including Day Hospital, Diagnosis and care psychiatric service, Hospice and Haemodialysis). The total gross surface for each bed is equal to about 233 square meters.

The number of operating rooms amounts to 23: 18 for surgery, 4 for day surgery, 1 for obstetric interventions. The endoscopy area counts 7 rooms: 4 for digestive endoscopy, 1 for bronchial endoscopy, 1 for urologic endoscopy and 1 for otolaryngological endoscopy. There are 116 outpatient rooms.

The total cost for the new hospital is about 305 million Euros, considering also the new technologies and the moving costs. The parametric costs for square meter and bed are respectively 1,640 Euros/square meter and 382,500 Euros/bed; these costs are in line with the parametric costs expected for the implementation of high complexity health structures.



The new Research Hospital "in advanced therapies in medical oncology" in Meldola

The Romagna Scientific Institute for the Study and Treatment of Cancer in Meldola was recognised as Research Hospital (IRCCS) in advanced therapies in medical oncology in May 2012, following the application submitted by the Emilia-Romagna Region in 2010. The Institute is the fourth IRCSS in the Region, with the Rizzoli Orthopaedic Institute of Bologna, the Institute of Neurosciences of Bologna and the Institute of Advanced Technologies and Healthcare Models in Oncology of Reggio Emilia.

The Institute started its activities in 2007 in the buildings of the old hospital in Meldola, now fully renovated, and is dedicated to treatment, education, and clinical, biological and translational research in oncology.

The Institute is a partnership between public organizations (the four Local Health Trusts of Romagna: Forlì, Ravenna, Rimini and Cesena, and the Municipality of Meldola) and no profit private bodies (Romagna Oncologic Institute and 5 bank foundations).

Fully operational since 2009, it has 30 hospitalization beds and 28 day hospital beds in the three seats of Meldola, Forlì and Cesena. About 350 people work in the Institute: physicians, researchers, support personnel; the average age is 38 years. In 2011 the number of hospitalizations amounted to 5,000, 800 of them for people coming from other Regions. More than 13,000 Patients were assisted in the same year with over 91,000 procedures, more than 54,000 of which for radiotherapic services and 27,000 for oncologic visits.

In order to guarantee Patients with the most advanced knowledge on diagnosis and treatment, physicians are divided in specific pathology groups, and other groups involve specialists of different disciplines. The Institute is committed in offering innovative therapies as gene therapy, radiometabolic therapies, radio treatments, experimental immunotherapy, somatic cell therapy.

The technologies available include a 256-slice axial computed tomography machine, a linear accelerator and a tomotherapy machine. In July 2011 the Radiopharmaceutical laboratory was opened to produce radiopharmaceuticals for diagnostic and therapeutic use, while in April 2011 the Italian Drug Agency authorised the Cell factory, a highly specialised laboratory where "cell therapies" are prepared, in particular therapeutic antitumor vaccines.

The conferral of the Research Institute status allows the Meldola Institute to become an excellence centre for high quality research as well as treatment and hospitalization. In Italy there are 45 such centres, and Meldola is the eleventh for oncology.

The Meldola IRCSS is also within the regional oncologic network that will soon be established; the Institute represents the hub centre for Romagna. The model is organised with primary level (spoke) hospital or territorial facilities connected to highly specialist hospital facilities (hubs) where Patients are sent for highly complex diagnostic or treatment services.

Education and training: the new system for continuing medical education (ECM)

In 2002 Emilia-Romagna Region has implemented a regional system for continuing medical education, with the contribution of the regional Commission for continuing medical education (experts with counselling functions) and of the regional Board for education in healthcare (representatives of health professional associations).
Since 2003 nearly 97,700 training courses organized by Health Trusts, public Institutes of the Regional Health Service and Universities were accredited.
Following a national agreement established in August 2007, the Region has started an innovation process of the regional ECM system and of continuing education in general.
The Regional Observatory for continuing medical education was established: it acquired the functions formerly entrusted to the Regional Commission and offers technical-scientific support to the Region for quality evaluation of education offer.

The new system for continuing medical education

Until 2011 the ECM system considered the education product, the course: Health Trusts proposed an education plan and the Region evaluated it according to indicators established at national level and assigned a definite number of credits.
In 2012 a fundamental step toward the new system was taken. The Regional Resolutions no. 1332/2011 (on the accreditation of the function of Trust governance of education) and no. 1333/2011 (on the accreditation of the function of ECM provider) established a perspective change in the quality evaluation process: no longer the products (that is the single courses) but the education providers are now evaluated.
In Emilia-Romagna at the moment only Health Trusts and public or private subjects already accredited for the function of Trust governance can be recognised as education providers, thus keeping the ECM system within the Regional Health System.

A regional team for indicators and verification systems

The Region established a regional team for the definition of indicators and systems to verify and evaluate health organizations that provide educations for Emilia-Romagna health professionals.
The crucial change from the evaluation of a written education project to the assessment of an education provider implies many new activities, including the training of competent evaluators that will verify the existence of accreditation requirements in Health Trusts.
Since July 2012 the accreditation process of providers and the collection of requests from potential providers (at the moment nearly 150) is going on.
The verification and evaluation phase will follow two directions. The first is connected to the regional accreditation system: when evaluation teams visit Health Trusts' departments or other structures, they check also requirements for education provider. It is an additional activity for regional evaluators, that beyond their traditional activity (structure accreditation), now evaluate also education. The second direction refers to the Regional Observatory for continuing medical education: it has to control on the adaptation of national rules at regional context, and will develop a parallel evaluation path to verify the correspondence between what Health Trusts declared as quality indicator and what they effectively realize: a field verification when the event is organised, following the accreditation verification as provider.

The group educational file

A new tool to improve the efficacy of the ECM system was also introduced: the group educational file.
With the old ECM system, a physician could acquire credits by attending any course, independently from the competence developed through these courses: the accreditation of the education projects did not require any correspondence between what the professional does and what he learns.
On the contrary, the educational file requires a coherence of training investments with the professional's role/position.
The Region has prepared and diffused the format to all Health Trusts that will be accredited as providers. At the beginning of each year the document will allow the planning of the professional improvement of each Operating Unit.

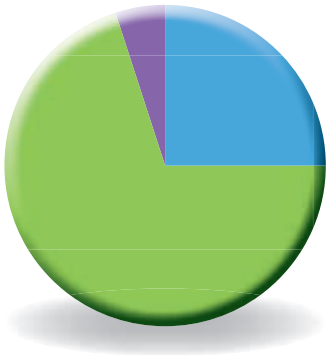
The Region-University research and innovation programs

The Region-University Program is mainly addressed to University-Hospital Trusts, representing the hub of synergies between the Regional Health Service, Universities and Research Hospitals; it however involves also Local Health Trust. With this Program the Region aims to underline the importance of research as part of clinical practice, and therefore research becomes one of the RHS institutional activities.

Activities in the three-year period 2007-2009

Activated at the beginning of 2007 according to the regional law 29/2004 and the Region-University Agreement Protocol of February 2005, the Program was structured in three research areas: area 1 for innovative research, area 2 for clinical governance, area 3 for training projects aimed at research and at creating research networks. In the 2007-2009 period the Program funded 71 projects for an overall amount of 30 million Euros. Nearly 80% projects were ended on time; 19.3% projects were granted a respite and will be concluded soon. From the funds, 1% was used to pay expenses for evaluation process. Allocation of financing was: 70% for 28 projects in area 1 (innovative research), 25% for 27 projects in area 2 (clinical governance), 5% for 16 training projects (area 3). Within area 1, 40% resources were dedicated to regenerative medicine.

Financing per area - Period 2007-2009



25% AREA 2: RESEARCH FOR CLINICAL GOVERNANCE

5% AREA 3: TRAINING PROJECTS AIMED AT RESEARCH AND AT CREATING RESEARCH NETWORKS

70% AREA 1: INNOVATIVE RESEARCH (40% FOR REGENERATIVE MEDICINE)

Activities in the three-year period 2010-2012

The second Program was started in 2010 after the good results of the first one, and is still going on. With an additional financing of 30 more million Euros for the same three areas, the aim is to work not only towards the selection and funding of individual research projects, but also towards the promotion of initiatives with greater strategic relevance for the Regional Health Service, also to optimize public investments. The tenders for area 1 and are 2 are described below; the tender for area 3 is at the drafting stage.

Tender for area 1 (innovation): from projects to programs

The tender for area 1 is aimed at financing long term programs (three years) more focused on integration between scientific knowledge and regional priorities. The tender was closed in November 2011 and allocations amounted to maximum 70% of total resources.

Programs have to address biomedical and health research themes to improve knowledge on a specific healthcare issue or pathology and to enhance the transfer of these notions to the entire Regional Health System, as indicated among the priorities of the Regional Health and Social Plan. Programs concern different areas: oncology, cardiology, rehabilitation, transplants and regenerative medicine, neuroscience, viral and autoimmune diseases, rare diseases.

The program integrates research activities structured in work-packages or projects developed by one or more Operating Units coordinated by a Program manager. Activities are organized in two macro-phases. The first phase is dedicated to enlarge knowledge on the considered issue (innovative aspect); the second phase concerns the spread and implementation of these notions in the Health System. For this reason, great focus was placed on program methodology and tools.

A total of 11 program proposals were presented: 3 for oncology, 2 for cardiovascular area, 1 each for rehabilitation, rare diseases, regenerative medicine of locomotor system, transplants, viral and autoimmune diseases, neuroscience. Proposers were the four University Hospital Trusts of Bologna, Ferrara, Modena and Parma and two Research Hospitals: the Rizzoli Orthopaedic Institute of Bologna and the Bologna Institute of Neurological Sciences (within Bologna Local Health Trust). After the first evaluative phase, proposals for strategic program were elaborated.

Another innovation in area 1 was the tender reserved to young researchers working within the Regional Health Service, with an allocation of 2.4 million Euros for biomedical and clinical-care research. 151 proposals were presented; 133 were admitted to the evaluation phase.

Tender for area 2 (clinical governance): how to orient research

The tender for area 2, launched in March 2012, presents a change in the areas of research to be financed. The goal is to optimize public investments in a crisis period, but also to respond to research needs expressed by the Regional Health Service.

Through a procedure that considers regional programming indications, 25 research topics grouped in 5 areas were identified: emergency, long-term care, perinatal medicine, rehabilitation, intensive care.

Also in this case, the selection path is organized in two macro-phases. In the first phase researchers and experts evaluates proposals; in the second phase, the complete projects will be examined in detail.

A total of 32 proposals were presented: 11 for rehabilitation, 8 for emergency, 6 for perinatal medicine, 4 for intensive care, 3 for long-term care. Proposers were the four University Hospital Trusts of Bologna, Ferrara, Modena and Parma and two Research Hospitals: the Rizzoli Orthopaedic Institute of Bologna and the Bologna Institute of Neurological Sciences (within Bologna Local Health Trust). Also the Local Health Trusts of Bologna, Modena, Ravenna, Reggio Emilia, Ferrara, Imola, Rimini, Cesena and Parma and the Hospital Trust of Reggio Emilia are involved as Operating Units in specific projects.

Analysing the topics, the most frequent are: evaluation of innovative care models in Emergency Departments and emergency medicine (6 proposals); appropriateness and safety assessment of innovative technologies in diagnostics and treatment (6 proposals); efficacy and effectiveness evaluation of different care models for the management of fragile elderly within the care network (3 proposals); care integration models for young people with particular needs (3 proposals); efficacy and appropriateness of therapeutic hypothermia after cardiac arrest (3 proposals).

Allocations for area 2 amounted to maximum 30% of total resources.

For more information:
http://assr.regione-emilia-romagna.it

Hospital for care intensity

An experimentation on "hospitals for care intensity" is undergoing, a new organizational model that arranges hospitalizations according to Patients' level of gravity and consequently to care levels needed, and no more according to pathology. The new models aims at combining safety, efficiency, efficacy and economic aspects of care offered in the hospital, that is more and more focused on the Patient. This model has been under debate for years; in 2012 Emilia-Romagna decided to experiment "hospital for care intensity" model in some facilities, and this organization is now becoming one of the goals that all Health Trust have to reach.

The new care model

The key idea of the "hospital for care intensity" is to have areas with a homogeneous level of care needed, and therefore with different numbers of nurses: one area hosts Patients with more critical health conditions and who need more frequent and relevant nurse care; another area groups Patients with less critical conditions who need lower levels of care. In each area Patients are assisted by equips with physicians of different specialties. As an example, in the same area a Patient operated for a lung lobectomy (removal of one lobe from the lung) and a Patient operated for abdominal aortic aneurysm can be found, both needing a constant nurse surveillance and other nurse practices as drainage monitoring or assisted ventilation.
Hospitalization areas are defined as logistic hospitalization platforms: on each platform, where different care processes are offered, teams of physicians with different competence and very specialized teams of nurses work on single Patients that can have more diseases or that may need different medical notions for the one disease. In this sense, the "hospital for care intensity" guarantees multidisciplinarity and a standardized care.

Responsibilities of physicians and nurses

In the new hospital model, care management of Patients is entrusted to expert nurses, while the clinical responsibility and the management of the diagnostic-therapeutic path belongs to physicians. Physicians can concentrate on their own specialist competence and provide it in different logistic platforms, where Patients that need these competences are hospitalized. Nurses can bring out their knowledge and further qualify their role in the care path.
The key idea is that Patient management is entrusted to expert nurses, while the physician decides the diagnostic and treatment path using the hospitalization logistic platform more suitable to the Patient's needs. As another example, in an area where Patients with cardiac or respiratory insufficiency are hospitalized, the cardiologist and the pneumologist visits these Patients, and are supported by nurses that constantly work in that area and can adopt care procedures not being hierarchically dependent from the physicians, but collaborating with them.

Experimentation in 9 Health Trusts

The most suitable placing of the hospital for care intensity (within the Medical Department, the Surgical Department, the Cardiovascular Department, in a wing,…) is being widely discussed; meanwhile, solutions are searched to fit the specific situations.
Considering the complexity of the transformation process toward the new hospital model, both for job organization and for facilities, different experimentation initiatives – but with a common methodology – are promoted, in order to be able to evaluate the effects and then proceed with such a great change.
Since 2012, nine Health Trusts in Emilia-Romagna are now experimenting the new care model in hospitals that differ for dimensions, functions and mission.

Local Health Trust of Bologna

The experimentation concerns the hospital in the province: Porretta Terme, San Giovanni in Persiceto, Budrio, Vergato, Bazzano, Loiano and Bentivoglio.
The goal is to optimize the use of beds while enhancing a horizontal structure of care (according to the level of care needed), and to implement and improve nursing competence.

University-Hospital Trust of Bologna

Three experimentations are being developed at the Policlinico Sant'Orsola-Malpighi.
One project concerns the reorganization of the Heart Surgery and Transplant System in particular on adult heart surgery, paediatric heart surgery, oncologic surgery, hepatobiliary surgery, transplants. The second experimentation involves the reorganization of surgical activities in the new Surgery and Emergency Department. The third project refers to the Department of Internal Medicine and Geriatrics, to reorganize hospitalizations and nursing management as already experimented in other regional post-acute departments.

University-Hospital Trust of Modena

The experimentation at the Policlinico concerns the implementation of a Department for care intensity/ care complexity in the surgical area (Head-neck Department) and in internal medicine (Department on medical specialties).

University-Hospital Trust of Parma

At the Maggiore Hospital the specialties of orthopaedics (Orthopaedics Operational Unit, Orthopaedic Clinic, Department for locomotor system diseases) are being reorganized.

Local Health Trust of Imola

The project at the Hospital of Imola concerns the critical area in the Emergency Department, in Intensive Care, Semi-intensive Care, and Cardiac Intensive Care Unit.

Local Health Trust of Reggio Emilia

The project involves all the hospitalization areas of the Departments of Internal Medicine, that will be structured as a single hospitalization area organized in four sectors according to the level of care needed: short-term observation area in internal medicine, area for medical "acute" Patients, medical area at high care intensity, area for post-acute Patients.

Local Health Trust of Forlì (leader), Hospital Trust of Reggio Emilia, Local Health Trust of Piacenza

The project that involves the three Health Trusts aims at measuring change and assessing clinical, organizational and managerial impact of the hospital for care intensity. In Forlì the reorganization was started in 2004; in Reggio Emilia the experimentation concerns the emergency area (emergency medicine, beds in short-term intensive observation area, hospital admission area, post-discharge area); in Piacenza surgery areas of the hospitals of Piacenza and Val d'Arda are involved in the transformation.

Experimentation stages

All members of the Trust project groups attended a training initiative to reinforce topics treated in the national meeting held in Bologna in March 2012 and to learn methodological tools; the goal was to have common guidelines, so that to be able to compare experimentations' results.

In June 2012 a first study session for physicians and nurses was focussed on tools to classify Patients according to the level of care needed (low, medium, high intensity).

In mid July 2012 a first monitoring meeting was organized to measure projects development; the leaders of the Trust projects presented the assessment plan and indicators identified to evaluate the experimentations.

The second monitoring meeting was held in October 2012; further meetings (maximum 5) will be organized within the end of 2013.

Between October and November 2012 a meeting is planned for members of the project groups from the Health Trusts not yet involved in the experimentation process. A continuous training course is also programmed to accompany professionals in this cultural change.

The whole experimentation is based on a regional guideline document, prepared within 2012, that defines fundamental principles of the "hospital for care intensity", methodological rules, indicators.

Prevention and control of infectious risk: antibiotic resistance and healthcare-associated infections; the "Hand hygiene" program

Infections caused by antibiotic-resistant microorganisms and healthcare-associated infections are very relevant issues in public health and represent a danger for Patient safety. The European Council has recently produced specific recommendations, while reinforcing the need to adopt effective measures and strategies to prevent such risk.
The Emilia-Romagna Regional Health Service has been focussing on these problems over recent years; the Regional Agency for Health and Healthcare has implemented specific interventions to improve Health Trusts' competence for prevention and control.
In the last year the main actions were meant to:

- guarantee a higher incisiveness of interventions implemented by the Health Trusts through the support offered by the regional Technical-scientific Commission "for the promotion of a responsible consumptions of antibiotics and the prevention of healthcare-associated infections". The Commission worked on: a) organizational assets to promote programs for a responsible consumption of antibiotics in hospitals and for the prevention of healthcare-associated infections; b) surveillance instruments and indicators to monitor the development of these programs at regional and local level; c) selection on priority issues and the relative interventions to reduce the inappropriate consumption of antibiotics in both the community and healthcare environments, in adults and children; d) training programs to improve Trusts' capacity to contrast this phenomenon;

- guarantee Health Trusts' capacity to watch over infectious risk and to promote programs of quality improvement in wards at risk. The Prevention Plan 2010-2012 introduced among its goals the constant enlargement of surveillance systems over post-surgery infections, so to implement further care improvement programs in surgical environment, as post-intervention infections are considered. Surveillance goals were established for each Health Trust, and the achievement of these goals was monitored;

- contrast the transmission of particular antibiotic-resistant microorganisms in healthcare environments (such as carbapenem-resistant Enterobacteriaceae. In July 2011 specific guidelines were released and a careful surveillance system was set up to monitor the trend and Health Trusts' adherence to the recommended measures.

Hand hygiene: an efficacious measure to prevent transmission of microorganisms

A correct hand hygiene of healthcare workers in healthcare settings (hospital, outpatient department, residential facilities for elderly, home care) represents a simple but fundamental measure to prevent transmission of microorganisms between Patients. Many studies demonstrated that a higher adherence to a correct hand hygiene is associated with a reduction in the risk of infections.

To increase healthcare workers' adherence to the recommended hygiene, different measures are to be implemented

- promotion of alcohol-based hand rubs and availability of these products;
- improvement of knowledge and of perception on the issue relevance;
- regular audit programs to monitor the effective adherence level;
- prompt intervention in critical areas.

The Emilia-Romagna Region has coordinated the national Campaign "Clean care is safer care" promoted by the World Health Organization, and has indicated the promotion of hand hygiene as one of the strategic goals of all regional Health Trusts.
The results obtained so far are:

- in the participating Operating Units, availability of alcohol-based products, healthcare workers' knowledge and perception, adherence to hand hygiene practises have all increased; in particular, the adherence passed from 37/100 opportunities before the Campaign to 74/100 after the Campaign, with a average relative increase of 100% and an average absolute increase of 37%;

- each Health Trust yearly evaluates the programs on a WHO grid that focuses on:
  - changes in the system;
  - education and training;
  - evaluation and feedback;
  - reminders in workplaces;
  - climate oriented to institutional safety.

  The "level of hand hygiene" of the Health Trust is classified in 4 levels: inadequate, basic, intermediate, advanced. In 2010, 12 regional Health Trusts were assigned to "intermediate or advanced level", with an improving trend in 2011.

To promote hand hygiene videos, posters, brochures, educational programs both for healthcare workers and for the community.

For more information:
http://assr.regione-emilia-romagna.it

Planned healthcare services: a review of international literature of studies on interventions to reduce waiting lists

The management of waiting lists for planned healthcare services (visits, examinations, deferrable interventions) represents one of the most pressing problem for citizens and healthcare workers in all developed healthcare systems all over the world; it is however yet unclear what the deep causes of this problem are, and experts and professionals are divergent opinions.

The project

To go thoroughly into the question and to offer solution to managers, a three-year research project was promoted to prepare a systematic review of international literature of studies on interventions implemented to reduce waiting lists.
The project is coordinated by the Regional Agency for Health and Healthcare - Regional Observatory for Innovation in Healthcare, and is financed with 150,000 Euros by the Italian Ministry of Health within the 2010 Tender for young researchers.

Collaboration with the Cochrane Effective Practice and Organization of care Group "Epoc"

The project is developed in collaboration with the international Epoc workgroup (Cochrane Effective Practice and Organization of care Group), which is focused on interventions to improve healthcare quality. As for methodology, the group works on the systematic review of literature to provide a comprehensive outline of the issue and indicate the most appropriate interventions to favor healthcare quality.
One of the starting point of the study is that different theories try to explain the causes of the problem. According to some theories, waiting lists as an opportunity to control inappropriate demand, in other words waiting lists are somehow caused to contain an excessive demand that the Health Service could not satisfy; other theories consider waiting lists as an inefficiency, as resources are available but are not use properly, so people have to wait, some examinations are repeated, the care pathway is repeatedly interrupted; some theories believe that the offer is not sufficient and waiting lists are caused by the limited number of services; according to other theories, allocations are not homogeneous and waiting lists are caused by inequalities (disadvantaged groups of population, with lower education level and lower social empowerment to deal within Public administration, more likely have to wait for healthcare services).
The question will then be treated with a universal approach, starting from the descriptions proposed by different Countries, not only those with a universalistic public health system. Survey methods on waiting times will also be studied, as they result to be different: from the disease onset, from the first contact with the specialist, from the booking.
The study will focus particularly on the solutions adopted in the various Countries: involving contracted private institutions to offer more services, not only to contain expense but also to promote economy through a competitive system; or working with clinicians, Patients and general practitioners to make demand more appropriate and reduce requests. This was for example the solution adopted by Great Britain, that established a maximum number of services that can be prescribed by a single physician.

The collaboration with Oxford University

Great Britain expressed a convinced interest in the study: the British Minister of Health asked to be promptly informed on the survey results, and the Oxford University will collaborated in searching all publications on the issue. The final goal is to conclude the international review in order to define the deepest causes of the problem and to find solutions that can be adopted in our context.
It is clearly a very complex problem, as it can be caused by very different elements; the solution will then have to consider various aspects: from cultural ones, to help the most disadvantaged within the system (first of all people that do not speak or even understand Italian), to the important theme of appropriateness, so relevant for example in diagnostics.

The start

The survey will start in a few months, as soon as financing is allocated, and will end by 2014.

The 2012 Program for the Regional Fund for non self-sufficient people

Also for 2012 Emilia-Romagna Region can allocate adequate resources for the system for non self-sufficient people. Notwithstanding the radical reduction of resources due to the cancellation of the National Fund, the Regional Fund can count on about 486 million Euros (in 2011 the amount was 461.6 million Euros). The Fund is distributed among the 38 Health Districts of regional Health Trusts, and is meant to finance services for non self-sufficient elderly and disabled: in particular, 319.498 million Euros are destined to service for over 75 population, 119.314 million Euros are designated for interventions for people with severe and very serious disabilities.

Programming, priorities

The Fund in programmed with local annual activity plans, on the basis of regional policies indicated by the Regional Control Room for Welfare (the regional seat devoted to the interaction between the Region and Local Authorities for social and healthcare policies) and shared with Trade Unions and citizens' representatives.

The plan drafting, including priorities for the Fund allocation on services and interventions measured according to local needs, is responsibility of District Committees (which include all Municipalities within each Health District), in consultation with the Manager of the Health Trust of each District.

Priority is to directly and indirectly support home care to allow as many non self-sufficient as possible to live in their own homes. Funded services include:

- development of integrated home care (health and social);
- increase of care allowances for non self-sufficient elderly with specific attention given to those not receiving severe disability allowance;
- qualification of family assistants (with training and "counselling centres");
- services of telephone emergency and assistance, managed also with volunteers;
- temporary "relief" admission in residential homes;
- support to informal networks of social solidarity (from "doorman" to social "custodian").

Program to promote good alimentary habits at school

With the resolution of the Regional Government no. 418/2012, the "Guidelines on healthy food and beverage in schools and tools to evaluate and control" were issued to improve the nutritional quality of food offer in school.

The document refers to the Regional Prevention Plan 2011-2012, that provides for specific projects on correct alimentary habits to promote a prevention culture and to guarantee a high safeguard level on public health; the guidelines were discussed also with the Health Trusts, the Regional Department for school, professional training, University and research, and the Regional Agriculture Department.

The basic principle of the document is that healthy and balanced alimentary habits, regular physical activity and abstention from smoking are the main protective factors for young people's health. Moreover, it is much easier to modify lifestyles and alimentary habits in childhood, with the collaboration of school and families.

The guidelines are meant for lunch and snack preparation in all grades of school, from kindergartens to secondary schools. In particular, "nutritional standards for school catering" were identified, concerning calorie distribution of meals, main nutrients, reference weights, frequency of food at lunch time, product characteristic (suitable food, food that can be served with carefulness, food to be avoided). Attention is focussed in particular on vending machines and coffee bars within school facilities, with specific indications on sold food and beverage ("nutritional standards for vending machines in school facilities").

The document suggests that foods with nutritional labelling are to be privileged, and underlines the importance of placing and visibility of each food in the vending machines to orient consumer's choices (for example, water should be placed at eye level, in a position with higher potentialities of selling than more caloric beverages).

The aim is the enforcement of nutritional standards in all schools using the "evaluation grid on standards implementation" (attached to the guideline); the grid can be used also by administrations responsible of school food offer for their self-evaluation.

The 2010-2015 Plan to eradicate measles and congenital rubella

Measles and rubella have not been eradicated by 2010, as indicated in the WHO Strategic Plan for the European Region in 2001. The European Countries were deeply involved to improve vaccination coverage, but still the two infections persist and continue to represent a serious health issue.
In particular measles provokes small and large epidemics among children and also among adults, provoking serious complications (blindness, encephalitis, severe diarrhoea, acute otitis, severe respiratory infections such as pneumonia, more frequent in children under 5 years and in adults over 20 years) and sometimes even death, also in the developed Countries. Rubella in pregnant women provokes severe birth defects (heart defects; cataracts, glaucoma and blindness; deafness; other chronic disabilities such as autism, mellitus diabetes, thyroid disorders).
In September 2010, considering the regional situation, the WHO Regional Committee for Europe postponed the goals to eradicate measles and rubella to 2015, underlying the importance of political commitment, partnerships, communication to (re)win community trust in vaccinations.
In Italy, the previous National Plan to eradicate measles and rubella was started in 2003 allowing to reach good results in terms of vaccination coverage (from 82% in 2003 to 90.5% in 2010), to implement a special surveillance system for measles, to introduce compulsory notification for rubella during pregnancy and for congenital rubella, to establish the second dose of measles, parotitis, and rubella (MPR) vaccine. The goals of vaccination coverage were not completely reached: some measles epidemics and congenital rubella cases are still registered; epidemics affect mainly adolescents and young adults, that are targets hard to be involved; training and transversal involvement of all professional figures are not yet fully accomplished.

The new National Plan

The Emilia-Romagna Region actively participated in the drafting of the new 2010-2015 National Plan to eradicate measles and congenital rubella, which was approved with the State-Regions Agreement of 23rd March 2011.
The Plan confirms the general goals to reach within 2015: to eradicate endemic measles (incidence less than 1 case/1,000,000 population), to eradicate endemic rubella (incidence less than 1 case/1,000,000 population), to reduce incidence of congenital rubella (less than 1 case/100,000 newborns).
The Plan also describes the specific goals and the actions to achieve them; in particular it underlines the importance to reach 95% vaccination coverage both for the first and the second MPR dose; the need to implement ad hoc actions to arrive at the most vulnerable groups that did not have the disease or were not vaccinated (in particular adolescents, young people, health workers, fertile women, populations "difficult to be reached"); the importance of surveillance, also through laboratory diagnosis.
The National Plan was adopted by Emilia-Romagna Region with resolution no. 916/2011.

The new Regional Plan

With the first 2003 Plan Emilia-Romagna Region had already reached good results, improved in the last years. In particular, the MPR second dose vaccine is given at the age of 6-7 years (in 2011 the coverage rate is 90.7%); the coverage of MPR first dose at 24 months of age increased from 90% in the first 2000s to 92.8%; the special surveillance system for measles, rubella during pregnancy and congenital rubella was implemented; the regional reference laboratory was set up. Periodical reports are elaborated and issued on infection and vaccination trends.
Notwithstanding the good coverage rates that are higher than the national average (in 2010, 90.5% at 24 months of age), measles cases are recorded also in Emilia-Romagna, mainly among adolescents and adults, sometimes with complications that require hospitalization; also some cases of rubella during pregnancy are signalled.
The new Regional Plan focussed on the need to improve MPR coverage rates in children and fertile women (to prevent rubella), and established the following goals to be achieved by 31st December 2012:

- as for vaccination coverage for measles at 24 months of age: to reach at least 80% children and vaccinate 95% of them, and to vaccinate at least 90% of the remaining 20%;
- as for protection from rubella in pregnant foreign women who give birth to their children in Emilia-Romagna: to vaccinate 95% of them (in Italian women the goal is nearly reached as 94% of them are already vaccinated).

Protocols to collaborate with laboratories and Birth Centres have been implemented to identify Italian and foreign women at risk with rubella as they are not vaccinated or did not have the infection, and to actively offer MPR vaccination.
A further active call (after the one in paediatric age) is programmed for young people over 18 years not yet vaccinated, to over MPR vaccination.
As data highlight, the increase in vaccination coverage reduces the cases of infection, but to completely eradicate measles and rubella, 95% children have be vaccinated as well as young people, adults, and fertile women.

Programs to promote and prescribe physical activity as a treatment

Chronic-degenerative diseases are the main death cause in the world and their impact is constantly increasing. In Italy they provoke the heaviest burden of morbidity and mortality: cardio-circulatory diseases represent the first cause of death, followed by cancers. On the whole, these pathologies are responsible for nearly 70% deaths. The main causes are referable to a few common risk factors: unhealthy alimentation, lack of physical activity, use of tobacco, alcohol, drugs.
The elimination of these risk factors could prevent 80% of premature heart diseases, 80% of cases of type 2 diabetes, 40% of cancers.
Irrefutable scientific evidences demonstrate that physical activity is needed at all ages to maintain a healthy condition and complete physical and mental efficiency. Recent epidemiologic researches reveal that physical inactivity, together with tobacco smoking, is the most important risk factor for diseases that represent the main causes of death or disability; it is considered responsible for 30% of ischemic heart diseases, 27% cases of diabetes, 21-25% of colon and breast cancers.
It is also widely demonstrated that physical activity improves mood and contrasts depressed state.

Physical activity is a powerful health factor

It is widely known that practising regular physical activity with intensity and method adequate to everyone's condition represents a powerful health factor; physical activity prevents widespread chronic diseases, contrasts the onset of conditions of frailty or non self-sufficiency, and in many cases efficaciously replace drug treatments. It is however very difficult to transfer the scientific evidences in everyday life.
The surveillance systems developed by the Italian Ministry of Health, Regions and Autonomous Provinces in the last years reveal that only 1/3 adults practise sufficient physical activity, and only 16% of children and 7% of adolescents practice the amount of physical exercise recommended for their respective ages. Data from Emilia-Romagna and those elaborated by WHO for the whole European Region are not different from the national ones.
This inconsistency between scientific knowledge and reality is no longer acceptable neither on an ethic level nor on the economic ground and for the sustainability of welfare systems: prevention measures can be correctly implemented to reduce the care burden and the costs for large numbers of Patients.

The programs of Emilia-Romagna Region

The 2010-2012 Regional Prevention Plan promoted programs addressed to the entire population and to people with conditions which will positively react to physical exercise.

Sport for health

These programs are addressed to the general population and require actions to be developed in many sectors of the society, to promote the culture of an active life as fundamental element for physical and psychological well-being. They are meant in particular for children, young people and people in socio-economic disadvantaged or frail conditions: many experiences and evidences in literature emphasize the efficacy and sustainability of these interventions and underline the need of an inter-sector and multi-disciplinary approach.
Eight projects have been started to promote physical activity in population: promotion of urban environments that encourage moving, interventions for the elderly who already attend recreational structures, promotion of physical activity at school and in the route from home to school. One of these 8 projects is supported through the Agreement between the Region, the Italian National Olympic Committee, the Italian Paralympic Committee and other bodies for sport promotion (see page 72).

Sport as medicine

These programs are addressed to people with conditions which will positively react to physical exercise, or who have risk factors for health; personalised programs of physical activity under health control and in total safety are prepared.
The Region participates in the experimental program of the Ministry of Health "Prescribing physical exercise as a prevention and treatment tool", aimed at prescribing physical exercise as a medicine to people with stabilised outcomes from locomotor or neurologic disabilities, people suffering from cardiovascular and dysmetabolic conditions, vulnerable elderly subjects.
Another project "Transplant… and now sport" is promoted with the Transplant National Centre to prescribe physical activity to people who had a heart, kidney or liver transplant.
The development of these projects can count on the experience of different Health Trusts in the past years, that demonstrated the efficacy of these care paths and offered good hints for further implementations in the region.

The future

All projects are part of a single action framework and are to be promoted in a synergic way to strengthen the efficacy, keeping in mind the continuity in the various age groups and sectors.
The Region aims at introducing these experiences among the services offered by the Regional Health Service through the construction of complex but sustainable paths within the system, and through the collaboration with other sectors of the society, to improve individual health and social welfare.

The Home for health promotion and protection in prison

Following the transfer of the healthcare functions in prisons from the Ministry of the Interior to the Ministry of Health, and therefore to the National and Regional Health Services (in April 2008), the Emilia-Romagna Region is involved in improving healthcare in the 11 regional prisons and in the Pratello juvenile prison in Bologna.

The Home for health promotion and protection in prison: facilities of the Health Trusts

The goal is to realize a Home for health promotion and protection in prison as already done with the Healthcare Homes implemented in many areas (see page 75).
At the moment, Health Trusts take care of people in prison through services offered directly within the facility, and if necessary through external services. The idea is to give a strong structure to the healthcare team working in each prison, by reproducing the functioning criteria of the Healthcare Homes within the facility: interdisciplinarity and integration of interventions, that is: different professionals integrate their activity to work better and to offer better health protection and care levels to prisoners.
Integration involves mainly general practitioners, nurses, out of hours service doctors, outpatient specialists, health workers at Mental Health and Pathological Addiction Departments of the Health Trusts, but it should foster the collaboration also from trainers, cultural mediators, social workers at local level.
Following regional indications, the Home for health promotion and protection in prison should become a Health Trust's facility in the prison: it offers healthcare and social-health services and is structured as an integrated system to care people since their arrival in the prison, based on the collaboration among professionals, on shared care paths, on professional autonomy and responsibility, on competence valorisation.
The organization can count on clinical and management relationships in which primary care is in strict contact with the other healthcare sectors (specialist care, hospital care, prevention, mental care). The role of the nurse as "case-manager" is strengthened.

The Chart of services

The Region is preparing a specific Chart of services offered within the prison: it will be a common frame that each Health Trust can personalize according to the specificity of the prisons (presence, type of people, …) in its territory.

Services

The Homes for health promotion and protection in prison can have different degrees of complexity depending on the prison where they are located; they have however common goals:

- to ensure an appropriate point of access for prisoners;
- to guarantee continuity of care 24 hours a day, 7 days a week with internal resources, but also with Health Trust's personnel when needed (specialists, emergency service, out of hours service doctors);
- to organise and co-ordinate responses for prisoners according to the needs of the prison community;
- to strengthen integration with the hospital especially for treatment of acute emergency cases and for transfer procedures for prisoners with chronic diseases to other facilities;
- to improve the integrated handling for prisoners with mental health problems,
- to develop prevention programs addressed to individuals, the community, and specific target populations of prisoners (for example drug addicts);
- to promote prisoners' participation in programs for health, valorising some existing experiences as the sections for reduced surveillance for drug addicts;
- to provide ongoing education and training for workers.

For the Pratello juvenile prison in Bologna a specific organization of services is being studied, considered the low number of minor prisoners.

The new regional program for young people with autistic spectrum disorders

The characterising elements of the new 2011-2013 regional program for young people with autistic spectrum disorders (resolution no. 1378/2011) are the implementation of a regional diagnostic protocol for all new cases referring to the Neuropsychiatric Services for children and adolescents and the experimentation of a regional treatment protocol, in order to guarantee transparency and homogeneity in diagnosis and care paths.

As indicated in resolution no. 328/2008 that promoted the first regional program for young people with autistic disorders, each Health Trust has implemented an organization following the hub and spoke model adopted by the Region for high specialty care: local hospitals and structures (spoke centres) send people with particularly complex diagnosis or treatment problems to few highly specialised centres (hub centres).

The adoption of this model allowed the institution of an Autism Centre at each Health Trust (spoke centre) located in the Neuropsychiatric Service for children and adolescents, with dedicated and already trained personnel, and the identification of three hub centres: in Rimini for the Vast Area Romagna, in Bologna for the Vast Area Central Emilia, in Reggio Emilia for the Vast Area North Emilia. The three hub centres are located at the Neuropsychiatric Services for children and adolescents of their respective Health Trust.

The treatment protocol is addressed mainly to children from birth to six years of age, and will be experimented in the whole region. It provides for an intensive intervention to improve the communicative and relational capacities of children with autistic spectrum disorders (these children show disorders in the relationship with others in interaction and communication).

The same goals are indicated also for the 7-11 and the 12-17 age groups, but in these cases interventions include also integration in life contexts and development of some autonomy.

The care path

The care path starts at the diagnosis of autistic spectrum disorders. This definition indicates a distribution of features that refer to a spectrum diagnosis, but that determine very different behaviours. For example, some children have good cognitive competence (high functioning) while others present intellective disabilities; some children show sufficient communicative competence and school results but have difficulties in the relationship with others.

The care path after the diagnosis provides for a clinical referent and for the development of a treatment program that involves different professionals – neuropsychiatrist, clinical psychologist, psychiatric rehabilitation counsellor, professional trainer, logopedist – in a "care system" view which includes also parents with support and parent-training activities, and teachers as children spend a large part of the day in school.

The "care system" idea is a characterizing feature of the Regional Health Service in this particularly difficult care context.

The care path concerns all age groups of children and adolescents, with different intensity and goals according to Patients' age. For children aged 0-6 the primary goals is to develop their communicative and relational competence; with age increase, interventions include also integration in life contexts and development of some autonomy.

The new program has already been implemented in all Health Trusts, with some new features. For example, in the first program children with autistic spectrum disorders could be sent from spoke centres to hub centres for deeper clinical investigations and for treatment. The clinical experience has revealed that professional competence is already available in spoke centres to manage the case; the relation with hub centres concerns clinical governance, that is management of epidemiologic assessment, of cases, of training organization: the hub centres have to control the epidemiologic trend, to guarantee services, to organize training coherent with the guidelines of the new program.

Care continuity after 17 years of age

A key feature of the new program, already indicated in resolution no. 318/2008, concerns care continuity when adolescents are no longer followed by Services for children and adolescents: the Health Trust has to guarantee a specific and dedicated handover to allow these Patients to find adequate responses in the Services for adults (Service for adult disabled people; Mental Health Centres) and specific competence for a good handling. Health Trusts are organizing training courses for workers in Psychiatric Services for adults and are implementing "autism programs" involving psychiatrists and Mental Health Centres.

Programs to improve communication with Patients and their families

The relationship between health workers, Patients and their families needs to be improved through a simple, transparent, efficacious communication that is also respectful of comprehension ability and personal past experience. Two projects were promoted and are being implemented at regional level: The first concerns the application of the health literacy principles, to favour comprehensibility and clarity of language in the direct relation health worker/patient, in information material, in the system of signals. The second project aims to improve empathic relations through the operator's capacity to better understand the other's (patient's, family's) experience and thus to effectively orient communication.

Health literacy project

The project was started with the formal constitution of the regional group (determination of the General Direction for Health and Social Policies no. 8543/ 2011), composed of 12 professionals from Health Trusts, the Regional Department for Health, the Regional Agency for Health and Healthcare. The goal is to design a project to increase health workers' consciousness on the importance of communication through a clear, simple but not banal language, so that anyone can fully understand indications and prescriptions and converse on a equal level.

What is health literacy

The health literacy discipline was promoted in the 80s in the United States; according to the American report "Healthy People 2010", it is defined as "the degree in which people are able to get, process and understand basic health information and necessary services, so to take appropriate decisions for health".
The importance of these principles is recognised at national and international level. Recent studies – in particular the Canadian ALLS (Adults Literacy and Lifeskills Survey), that in 2003 analysed the literacy capacities of a large sample of adults people in Canada, Bermuda, Italy, Norway, Suisse and United States – demonstrate that in Italy the average level of alphabetization is below what is needed to profitably use common materials for everyday life (in bank, post office, supermarket, pharmacy, hospital).
Health literacy concerns three application areas: verbal communication between health worker and Patient, written communication, accessibility to health facilities in terms of easiness to orient oneself and reception.
Health literacy competences are required for dialogue and discussion, to read health information, to understand instructions, to use medical equipments for oneself or for a family member (for example, glucometer or thermometer), to calculate intake timetable and dosage of drugs.
Health literacy represents a challenge for health professionals who have to communicate in a more clear and transparent way with people who refer to them, trying to overcome systemic barriers that hinder comprehension (for example, medical language technicalities, information overload in written materials, organizational and structural complexity of the system).
Patients who clearly understand what they are told or given are Patients that will be able to follow therapies in the correct way, to adopt an adequate lifestyle, to better cure themselves.
It is therefore fundamental to use a "common" language both in the direct relation and in written materials, while preserving at the same time a pedagogic function in order to increase the bargaining power of the Patient. When needed, uncommon words can be used to improve people's linguistic knowledge and to enable them to make choices (for example, probably only few know that "dyscalculia" means difficulty in learning or comprehending arithmetic; but the word can be used with a clear explanation of its meaning, so that parents of children with learning problems learn a medical term that they will hear often).

The steps of the project

The regional group organized the training path for health professionals and communication experts of the Health Trusts with the aim to spread health literacy principles and practices in the whole system.
For the first training path, the oncologic area was chosen as particularly significant for communication capacity and for the importance of "being understandable". The course was developed in two weeks (November 2011 and January 2012) in collaboration with the Harvard School of Public Health in Boston, and it involved 4 professionals (2 health workers in the oncologic area and 2 communication experts) for each of the 17 regional Health Trusts. The training was organized in frontal classes, workgroups, Patients' stories, simulations.
In coherence with this first path, two other parallel courses were organized to develop relational competences in health professionals and to redefine the language used in information material for the oncologic area. To promote relational competences, the health professionals who attended the first path are now involved as trainers, after an ad hoc didactic and methodological training (this training is going on and is planned to end in October-November 2012).
As for information material, an analysis of existing materials will involve also Patients and their families at Trust level and then at regional level. The goal is to define strategic steps for communication in the entire care path for three cancers (breast, colorectal, prostate) from the first examinations to follow up, to verify if these steps are observed in the existing information materials, and if necessary to review or elaborate new materials that all the Health Trusts can use and in case adapt.
The aim for future years is to apply health literacy methods also to other care areas till its complete diffusion.

Project to develop empathic relations and counselling

Connected to that on health literacy, another project was implemented on the theme of communication between the health operator and the Patient: the work group "Development of empathic relations and counselling activity in the health worker/patient relationship" was constituted with determination of the General Direction for Health and Social Policies no. 12556/2011.

Empathy

Empathy concept is intended in its phenomenological meaning, as the capacity that each health professional – independently from personal attitudes and ethical beliefs – should develop to identify with the other (patient, family) to better understand their experience (also painful and difficult events, for example the communication of an unfavourable diagnosis, or the death of a relative) and thus to effectively orient communication. The group is composed of 20 professionals from the Regional Department for Health, the Regional Agency for Health and Healthcare, Health Trusts, the Private Hospitals Association, and representatives of the Regional Committee for service quality.

The steps of the project

The goal is to identify organizational model and procedures to improve the efficacy of communication between health workers, Patients and their families, in particular for diagnosis announcement and management of the relation with Patients with chronic-invalidating diseases and/or potentially unfavourable prognosis.
The group also has to detail good practises in operational recommendations for Health Trusts and accredited private structures, valorising experiences and practices promoted by Associations of Patients and of families in particular on specific therapeutic paths: oncology, paediatrics, intensive care. The group will define recommendations also on training paths for health personnel.
Some of the most interesting experiences realized in health services were analysed and discussed, such as protocols, documented procedures, techniques (the best known is the "Buckman Protocol for delivering bad news"), and the impact of these tools on communication efficacy was studied.
From this analysis process the awareness arose that learning these techniques requires a preceding work session on professionals' cultural background and on the organizational aspects of care contexts. Some experiences realised to improve the organization setting and professionals' competences in the relationship with the Patient – organizational counselling, narrative medicine paths, training for internal communication – and involving oncologic and paediatric Patients, Patients in Intensive Care Units, family members and health professionals were analysed, to identify shared goals for the improvement of care paths.
Particular focus was set on interdisciplinary paths involving more Operational Units, Departments, institutions; on the interface hospital/local area; on the experience of the Psycho-oncology Services.
From this analysis, some recommendations were defined, that will be presented in a regional document for Health Trusts and accredited facilities, to be published within 2012.

The Silver PASSI research: the surveillance system on life quality for elderly people

Through sample surveys, the Silver PASSI surveillance system (Progresses in Health Trusts for health in Italy) promoted by the Centre for disease control and prevention of the Ministry of Health with the collaboration of the Italian Institute for Health, allows to collect information on health state and life quality of people over 64 years of age, on interventions implemented by the healthcare and social-health services, on obtained results.
The first survey was conducted in 7 Italian Regions (Emilia-Romagna, Liguria, Puglia, Sicilia, Toscana, Umbria, Valle d'Aosta) in 2009, and in 3 other Regions in 2010 (Veneto, Abruzzo, Marche). The research is coordinated by each Region; it involves healthcare and social bodies and institutions, so to favor a fundamental collaboration both for the sustainability of the survey itself, and for the common use of results and the implementation of integrated interventions, able to offer health answers and actions of social promotion.
To prepare the survey tool (a questionnaire drawn in collaboration with the National Institute of Health) also the WHO strategic indications on "active ageing" where used: participation in relational life, health state, safety (protection from influenza with vaccination, use of the tele-emergency service, protection from heat waves, …).

Methodology

The adopted approach is population surveillance based on repeated epidemiologic surveys on representative samples of the study population. The aim is to collect few key information in order to:

- describe health problems and features of the over 64 population;
- identify and evaluate effective actions and intervention strategies.

Instruments and procedures are simple, easily acceptable by workers and citizens and economically sustainable for social-health and social-care resources. The collaboration of health and social bodies and institutions at all levels (national, regional and local) is fundamental for the survey.
Study population are people over 64 years of age, not institutionalized. In each participating Region in the 2009-2010 survey, the sample was extracted from the health registers; data were collected through a standardised questionnaire elaborated with the National Institute of Health.

The 2009 survey in Emilia-Romagna: sample and results

The sample for the regional 2009 survey counted 620 people aged over 64 years, representative of the regional population. Women amounted to 58% of the total sample, due to their longer life expectancy. The average age was 75 years.
Population was divided on the basis of their autonomy in performing everyday basic activities and other more complex activities, measured with internationally validated indexes:

- functional activities in everyday life,
- instrumental activities in everyday life.

Four groups of people with similar autonomy levels and needs were thus created. The identification of these groups is necessary in order to define intervention priorities, to program activities and to evaluate strategies implemented by social and health services and by the whole society.
The questionnaire was administered to sampled people by 100 trained interviewers working in the participating Municipalities, in Trusts for services to people, in Health Trusts or in Voluntary Associations.

Results

In the sample, 67% of the people have a low level of education (no education or primary school), 55% live with family members of the same age, 22% live alone, mainly women and in the age group 75 and over.
45% of the sample (more than 435,000 people) are in good health and with a low risk of illness; among those over 74 years, the value decreases to 28%.
25% of the interviewed people (about 240,000) are in good health but at risk of illness and frailty, without relevant differences among age groups (28% in people aged 65-74 years, 23% in people over 74).
An average of 18% (about 174,000 people) shows signs of frailty, in particular among people over 74 years (31%, vs. 6% in the 65-74 age group). People with signs of frailty can be divided in two groups: low frailty (10%) and marked frailty (8%, estimated 77,000 people).
An average of 12% (about 116,000 people) has disabilities, with great differences related to the age (4% in the 65-74 age group, 18% among the over 74 people). 10% of these elderly are partially disabled, the rest are totally disabled (estimated 19,000 people).

Emilia-Romagna results according to the WHO indicators on "active ageing"

Participation

More than half of the interviewed people over 64 (52%) still represent a resource for the family, friends and the community, as they take care of grandchildren or other family members, they help peers, they do voluntary activities.
One third of the sample (35%) declare to participate every week in activities for other people, for example in senior recreation centers; 5% attend courses, in particular English and computer classes.

Health

30% of the over 64 sample judge their health positively, while 42% declare that it has worsen in the last year.
More than half of the interviewed (51%) are active; 61% have ponderal excess, only 6% take at least 5 portions of fruit or vegetables every day as recommended.
43% drink alcohol in everyday life, and 6% of these drink alcoholic beverages outside meals.

10% smoke, more men than women (14% vs. 7%).
13% of the sample declare to have sight problems; among them, 72% cannot see well even wearing glasses.
16% have hearing problems; among them, 83% use hearing aids.
28% declare to have chewing problems, but only 45% saw a dentist.
19% of the sample report depression symptoms, and 10% result at risk of isolation.
People aged over 64 than cannot count on any free-of-charge help for little needs amount to 22%.

Safety

85% of the over 64 interviewed report to know about senior recreation centers or other associations for elderly people, and 27% attended them.
28% are aware of the existence of the Unified access points and 58% know the tele-emergency centers.
About one third has received information to protect themselves against heat waves.
Nearly 70% have had the influenza vaccination in the 12 months prior to the interview.
People aged more than 64 years with some limitations in at least one instrumental activity in everyday life amount to 42%; 94% of them are given some help in doing these activities, mainly by family members (78%) or by paid assistants (21%).
12% have some kind of disability: 94% have some help in the actions that they cannot do by themselves, by family members (54%), by paid assistants (43%), by public services (3%).
Nearly half of the sample (46%) refer some or heavy economic difficulties: they do not have enough money to buy what they need for their living every month.
95% benefit of a pension; 4% do not have any income and 1% live on work or other incomes. Apart from receiving a pension, 4% of the over 64 have a paid job and 9% have an income from self-employment.

Perspectives and the 2012 survey

The Silver PASSI research is now in the experimental phase; it will be included in the National Prevention Plan. Between April and May 2012 a new survey is programmed. Emilia-Romagna has enlarged its sample to 1,620 people aged over 64 years living in 82 Municipalities.
Information is collected monthly through home or phone interviews by trained social-health personnel working in Municipalities and Health Trusts.
All the regional Health Trusts are involved.
The use of standardized instruments and methods will allow the comparison with results collected at national level.

Agreement between Emilia-Romagna Region and the Private Hospitals Association (AIOP)

In December 2011 (resolution no. 2277/2011) the agreement between Emilia-Romagna Region and the Private Hospitals Association (AIOP) was signed; it regulates the relations between the Regional Health Service and private hospitals as services and resources for the 2012-2014 period are concerned.
The agreement formalizes in economic and normative terms the accord already reached in December 2010 at the end of the accreditation process of private hospitals, that have thus become an integral part of the social-health system in the Region which is fully accountable to the public, and hinges on network co-operation.
Considering the difficult period, the Region and AIOP have decided to keep the budget unmodified till 31st December 2012 at 280 million Euros (as in 2010 and 2011, after the 2.2% increase for budget and the 2% increase for tariffs decided at the end of 2009 for 2010).
The cornerstone is to guarantee Patients to receive low and medium intensity treatments near their homes: the agreement confirms the budget to Health Trusts (215.7 million Euros from total resources) in order to offer services through private accredited hospitals located in their area of competence. For the first time, a negotiation also at Area Vasta level has been proposed, with precise indications on volume limits and agreement criteria.
The agreement does not include high specialty services (under discussion for a new agreement), and concerns hospitalization services and outpatient services. It confirms the common goal to reduce waiting lists and the role of private hospitals in programming.
The agreement also reinforces the importance of monitoring services offered; the new resolution (no. 354 of 26th March 2012) deals with controls both on public and private activities, and focuses not only on economic aspects but also on the appropriateness of services, considering both the type (ordinary hospitalization, day hospital, outpatient service) and its congruence with the pathology. Controls are performed by the single Health Trusts, but the coordination is at Area Vasta's and at Region's level.

Agreement between the Region, the Italian National Olympic Committee, the Italian Paralympic Committee and other bodies for sport promotion

The agreement signed in May 2012 stimulates a stronger collaboration between the Health Service and the world of sport. It is meant to promote physical and sport activity as a practice to stay in good health and to endorse a culture that reinforces the positive aspects of physical activity and sport, while avoiding the exasperation of agonistic sport through specific educational interventions and programs. Technicians, trainers of junior teams, managers of sports clubs should be encouraged to motivate and involve all participants in the activities, also with "teamworks" in which everyone contributes to foster a healthy, safe, inclusive, solidaristic living, thus contrasting social tensions and conflicts caused by the worsening economic crisis, and fighting against the spreading if drugs and doping among sportspeople.
The agreement includes also a educational program for managers and trainers of sports club in order to valorize their role in reaching this goal.
The Region contributes with experts on the relationship between sport and health, encouraging the involvement of schools, in particular PE teachers, and families. With the Paralympic Committee, some educational paths will be organized to promote physical activity for disabled people; the Regional Anti-doping Centre (at the Local Health Unit of Modena) is engaged in contrasting the use of doping substances and the abuse of drugs and supplements. The Region has allocated 50,000 Euros for training programs for managers and trainers, that are under definition.
On their side, with the agreement the Italian National Olympic Committee, the Italian Paralympic Committee and other bodies for sport promotion engage in increasing the number of associations that offer opportunities of physical activity to the population, with activities in parks, "piedibus" (school bus service on foot), walking groups, initiatives within the project "prescription of physical activity as a medicine" (see p. 65).
The Region and the other subscribing bodies are all involved studying proposals to develop new sports facilities that can support the general idea of the agreement.

Hub and spoke model for hospital care

Regional programming has provided for the adoption of a specific network model for organising high specialty hospital care, namely the hub and spoke model. This model is based on the connection between hubs (high specialty centres) and spokes (local hospitals or facilities); the latter can send their Patients to hubs when their health conditions require the transfer. This planning has been extended to a regional level, and operates alongside local programming, ensuring services that guarantee independent living in the community.

There are various hub and spoke networks already operating:

- cardiology and cardiac surgery
- neurosciences
- transplants
- serious trauma
- serious burns
- perinatal and paediatric intensive care
- highly-specialist rehabilitation
- 118 system (emergency service number)
- transfusion system
- various networks for specific rare diseases
- genetics
- hereditary metabolic disorders (implemented in 2011)
- rare paediatric diseases (implemented in 2011).

Other networks are also being planned, including a highly complex laboratory diagnostics network and a pneumology network.

The hub and spoke network for rare paediatric diseases (resolution no. 1897/2011)

H = Hub centre (University Hospital Trust of Bologna)
S = Spoke centres (Local Health Trusts of Piacenza, Imola, Ravenna, Forlì; Cesena, Rimini; University Hospital Trusts of Parma, Modena, Ferrara; Hospital Trust of Reggio Emilia)

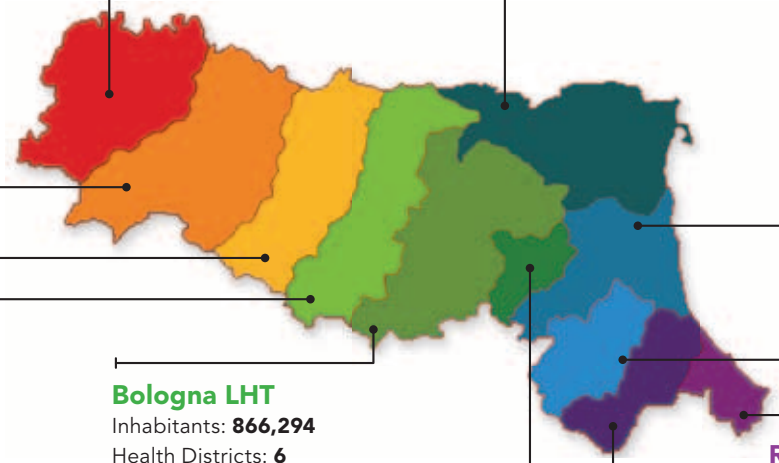
The hub and spoke network for hereditary metabolic disorders (resolution no. 1898/2011)

H = Hub centres (Local Health Trusts of Piacenza, University Hospital Trust of Bologna)
HS = Hub and spoke centres (Hospital Trust of Reggio Emilia, University Hospital Trusts of Modena)
S = Spoke centres (in all 11 Local Health Trusts)

Organization of the Health District

Health Districts ensure the delivery of essential levels of care. They are the framework within which requirements are gathered, services are planned, healthcare and social-health care is provided, and results are assessed. Health Districts commission services to the different Departments: territorial departments (Primary Care Departments, Public Health Departments, Mental Health and Pathological Addictions Departments) and hospital departments.
As of 31st December 2011 there are 38 Health Districts and 216 Primary Healthcare Units.

Health Districts, Primary Healthcare Units, reference population - Year 2011



Piacenza LHT
Inhabitants: **291,302**
Health Districts: **3**
Primary Healthcare Units: **13**

Ferrara LHT
Inhabitants: **359,686**
Health Districts: **3**
Primary Healthcare Units: **18**

Ravenna LHT
Inhabitants: **394,464**
Health Districts: **3**
Primary Healthcare Units: **17**

Parma LHT
Inhabitants: **445,283**
Health Districts: **4**
Primary Healthcare Units: **21**

Forlì LHT
Inhabitants: **188,710**
Health Districts: **1**
Primary Healthcare Units: **11**

Reggio Emilia LHT
Inhabitants: **534,014**
Health Districts: **6**
Primary Healthcare Units: **23**

Bologna LHT
Inhabitants: **866,294**
Health Districts: **6**
Primary Healthcare Units: **41**

Rimini LHT
Inhabitants: **332,070**
Health Districts: **2**
Primary Healthcare Units: **19**

Modena LHT
Inhabitants: **705,164**
Health Districts: **7**
Primary Healthcare Units: **39**

Imola LHT
Inhabitants: **132,637**
Health Districts: **1**
Primary Healthcare Units: **7**

Cesena LHT
Inhabitants: **209,622**
Health Districts: **2**
Primary Healthcare Units: **7**

The Healthcare Home

At the moment in Emilia-Romagna there are 49 Healthcare Homes already working.
Set up by the Region with Government Resolution no. 291/2010, the Healthcare Homes are facilities where effective, ongoing daytime care is delivered to the reference population of the Primary Care Units in the area. The Homes are a facility of the Health District and the management is assigned to the Primary Care Department. The Healthcare Homes are based on the strong collaboration among professionals from different services, so to guarantee full care and continuity of care. The Homes can have various degrees of complexity depending on the density of the reference community population and their geographical location.
There are three types of Healthcare Home.

The 'small' Healthcare Home
It guarantees general medical assistance 12 hours a day (8 a.m. till 8 p.m.), nursing care, 1st level Family advisory health centre with obstetrician, home care co-ordination department, and unified booking centre. A social worker is also available.

The 'medium' Healthcare Home
It guarantees also outpatient specialist services, out-of-hours service (24 hour assistance), paediatric clinic, public health clinics for vaccinations and screening activities. Possible presence of a gym for physical exercise.

The 'large' Healthcare Home
It guarantees all healthcare activities relating to primary care, public health and mental health. It ensures a response to health and social-health needs that do not require hospitalisation.

The Healthcare Homes already working
At 30th June 2012 there are 40 Healthcare Homes already working, organized by Health District.

Local Health Trust of Parma:
10 Healthcare Homes
Health District Parma: Colorno
Health District Fidenza: San Secondo Parmense, Busseto
Health District South-East: Sala Baganza, Felino, Langhirano, Traversetolo, Monticelli
Health District Valli Taro-Ceno: Medesano, Bedonia

Local Health Trust of Reggio Emilia:
9 Healthcare Homes
Health District Montecchio: Sant'Ilario d'Enza
Health District Guastalla: Reggiolo, Boretto, Brescello, Novellara
Health District Correggio: Fabbrico
Health District Scandiano: Rubiera
Health District Reggio Emilia: 2 Healthcare Homes

Local Health Trust of Modena:
2 Healthcare Homes
Health District Pavullo: Fanano, Pievepelago

Local Health Trust of Bologna:
7 Healthcare Homes
Health District Porretta Terme: Porretta Terme
Health District Pianura Est: San Pietro in Casale, Pieve di Cento, Molinella
Health District Pianura Ovest: Crevalcore
Health District Bologna: 2 Healthcare Homes

Local Health Trust of Imola:
2 Healthcare Homes
Health District Imola: Castel San Pietro, Medicina

Local Health Trust of Ferrara:
3 Healthcare Homes
Health District South-East: Portomaggiore
Health District Centre-North: Copparo, Ferrara

Local Health Trust of Ravenna:
5 Healthcare Homes
Health District Ravenna: Russi, Cervia
Health District Faenza: Faenza, Brisighella
Health District Lugo: Bagnacavallo

Local Health Trust of Forlì:
2 Healthcare Homes
Health District Forlì: Modigliana, Predappio

Local Health Trust of Cesena:
4 Healthcare Homes
Health District Rubicone: Savignano, Cesenatico, Gambettola
Health District Cesena: Mercato Saraceno

Local Health Trust of Rimini:
5 Healthcare Homes
Health District Rimini: Bellaria, Santarcangelo, Rimini
Health District Riccione: Coriano, Morciano di Romagna

In 9 other facilities many healthcare services offered by the Healthcare Homes can be found (reception, booking centre, sampling centre, obstetric and paediatric outpatient service, nursing and outpatient service), but some requisites indicated by regional legislation are still missing to be formally recognised as Healthcare Homes. These structures are: 2 in Piacenza (Health District Levante: Bettola, Cortemaggiore), 4 in Reggio Emilia (Health District Castelnuovo Monti: Busana, Toana, Carpineti, Villa Minozzo), 3 in Modena (Health District Sassuolo: Montefiorino; Health District Mirandola: Finale Emilia; Health District Castelfranco Emilia: Bomporto).

The network of oncology pharmacies

The network of oncology pharmacies is constituted of Health Trusts' hospital pharmacies that produce antiblastic drugs in their own laboratories (Anticancer Drugs Units - UFA). It is meant to guarantee a higher safety for Patients and for workers who handle drugs, to offer a qualified and constant support to specialists, to comply with quality standards for drug preparation, to optimize resources use for anticancer therapies.
Risks in handling chemotherapy antiblastic drugs are well known: laws in force establish that procedures indicated in the "Guidelines for workers exposed to antiblastic chemotherapeutics in healthcare environment" (Italian Official Gazette no. 236 of 7 October 1999) should be adopted in handling these drugs.

The network of oncology pharmacies

Following local experiences, since 2009 the Region has implemented a path to develop the centralization of the preparation process of these drugs.
The oncology pharmacies have to adopt uniform parameters in computerized programs for drugs preparation and for the management of the whole therapeutic process; they have to standardize technical and organizational criteria; they have to control the adoption of specific protocols and the use of new products, defining procedures to point out interactions and toxicity levels of the handled drugs.
The path also includes the implementation of procedures for therapies preparation with a dataset of clinical parameters (defined with the contribution of the Regional Oncology Commission), useful for an effective clinical governance in the oncologic area. Relationships with specialists and among professionals should be promoted and strengthened for a better handling of oncologic Patient, and an efficacious reduction of drug-related adverse events needs to be endorsed.
In 2011 the centralized preparation is already working at the University Hospital Trusts of Parma, Modena, Bologna and Ferrara, at the Hospital Trust of Reggio Emilia, at the Local Health Trusts of Piacenza, Ravenna and Rimini and at the Research Hospital Institute for Cancer research and Care (IRST) in Meldola, which works also for Cesena. The Local Health Trust of Bologna will have a centralized laboratory within 2012, while some reorganizations are programmed in Parma, Reggio Emilia and Modena.

Training

Within the network of oncology pharmacies, training and continuous education for personnel working in Anticancer Drugs Units is very important to develop the needed competence and to guarantee the quality of prepared drugs.
Starting in 2009, when the network was implemented, the Region has organized yearly courses for pharmacists employed in UFA Laboratories or studying in that context, for pharmacists in Oncology Departments, for laboratory technicians and health personnel working in UFA Laboratories. The goal is to create a common knowledge background and a sharing of experiences realized in already implemented UFA Centers, thus improving the quality and safety of oncology therapies and fostering exchanges with expert physicians and pharmacists. The courses organized in 2010 and 2011 concerned clinical themes related to the most common cancers (breast, lung, kidney, colorectal, gastric, melanoma, multiple myeloma, myelodysplastic syndromes and different leukemias), and also pharmaceutical and organizational aspects of the UFA Centers.
The 7 experienced Centers of the University Hospital Trusts of Parma, Modena, Bologna and Ferrara, the Hospital Trust of Reggio Emilia, the Local Health Trusts of Ravenna and the Research Hospital in Meldola also organized training stages for pharmacist and technical personnel employed at the newly established UFA Laboratories.

Research

The network of oncology pharmacies has developed a research project on the stability (validity) of some oncologic drugs with high economic impact over time. The actual drug card reports very limited validity for drugs over time, but some studies in literature demonstrate that it is possible to enlarge such validity. Also the study by the regional network confirmed similar results. The application of the study results in everyday practice requires the definition and sharing of pressing quality procedures to be applied in each phase of the laboratory management.

Production data from the UFA Laboratories

In 2010 the 7 experienced laboratories prepared 190,881 oncologic drugs, equally distributed among the Centers according to reference local population.
In the UFA Laboratories also experimental oncologic drugs and "ancillary" drugs to complete Patients' therapy are produced. Total number of ancillary drugs produced in 2010 amounted to 138,689.

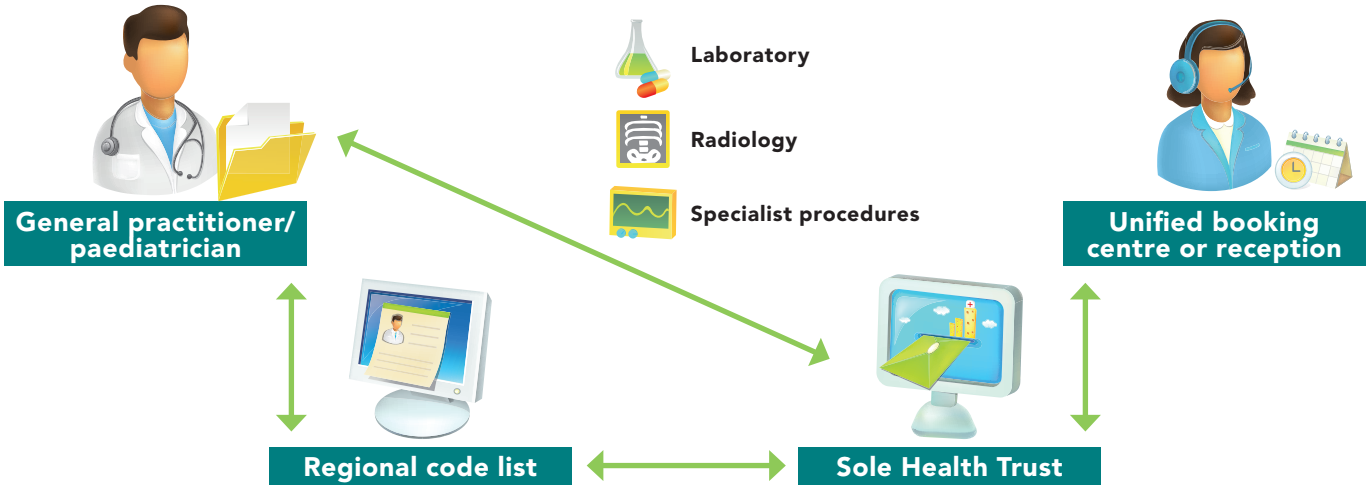
The Sole network (online healthcare), Patient summaries, and electronic medical files

Already 98% general practice physicians and paediatricians are connected with other Services and professionals of the Regional Health Service through the Sole network. This computerised network was promoted in 2003 by Emilia-Romagna Region to allow general practice physicians and paediatricians, professionals in hospital and territorial services, administration departments in Health Trusts to communicate with each other, in order to improve and simplify public access to services, and to enhance both Patient management and continuity of care.
Documents and information on Patients, in compliance with privacy legislation (e.g. prescriptions, referral letters, discharge forms etc.) are exchanged through the network, making information and not people "moving".
From 2003 to 2011, 54 million Euros were allocated to build the Sole network, that costs about 8 million Euros per year for its management.
Emilia-Romagna is among the first Italian Regions for the quality and quantity of information technologies in healthcare. The decision of these last years to allocate many resources in a low tangibility and high complexity system that also requires big organizational changes was certainly a courageous and far-sighted choice, that is now showing concrete results.

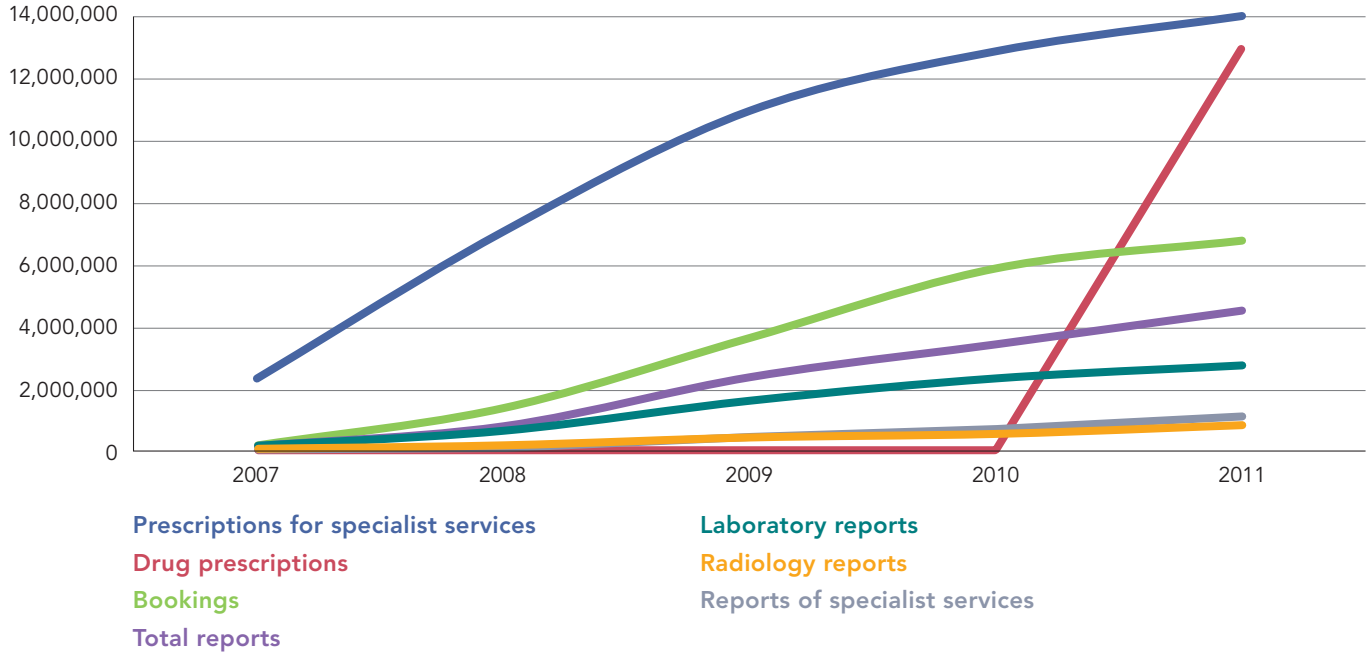
The results of the Sole network

The system allows to exchange information on Patients' clinical records. All professionals refer to a unified regional catalogue for specialist prescriptions. All prescriptions for drugs or specialist visits and examinations are printed on paper but are also transmitted through the network and in a near future they should be only in the electronic format, thus speeding up counter waiting times, in particular for chronic Patients.
Through the Sole network all data on influenza vaccinations from the 2010-2011 campaign can be collected.
The integration between Trust systems and physicians' medical files allows the transmission of data on exemptions for condition or income, and information on income level, so that prescriptions for drugs or outpatient specialist services can be automatically prepared.
The helpdesk for general practitioners and paediatricians is available through toll free number or email from 8.30 a.m. to 6 p.m. on weekdays. 90% of the signalled problems are solved within 24 hours; when interventions at the physician's outpatient department are required, a longer time is usually necessary.
The amount of documents transmitted through the Sole network has increased in years as the number of connected general practice physicians and paediatricians has increased and the system has improved. It is to be noted that each prescription and report can refer to more than one service, in particular prescriptions for laboratory examinations can contain up to 8 services and reports usually refer to over 10 services. Therefore, there cannot be any correspondence between the number of documents transmitted through the Sole network and the number of services offered by the Regional Health Service in 2011. Moreover, medical documents can be transferred through the network only with Patient's formal consent, and at 31st December 2011 only 60% of the regional population agreed on the use of this system.

The communication cycle within the Sole network



Documents transferred within the Sole network - Period 2007-2011



Potentialities of the Sole network

The Sole network has great potentialities: thanks to this system, online booking (http://www.cupweb.it), online payment for services (http://www.pagonlinesanita.it), the creation of the personal electronic file (http://www.fascicolo-sanitario.it), the availability for health professionals of the Patient summary and of the electronic medical file for home care are possible.

The electronic medical file

The national guidelines of the Ministry of Health define the electronic medical file as "the collection of digital medical and social-health data and documents relating to each Patient". Once the party involved has given their formal consent, the file is permanently available on the internet (http://www.fascicolo-sanitario.it) in a protected, confidential format i.e. it can only be consulted with the use of personal authorised access. Each citizen can decide to create an electronic medical file at any time. This procedure is optional. The decision not to create a file has no consequences on a Patient's rights to receive all healthcare and social-health services provided by the Regional Health Service in Emilia-Romagna.

According to the guidelines, the documents that have to be included in the file are medical reports, Emergency Room reports, discharge letters, Patient summaries (health electronic document that summarises past and present clinical events relating to each Patient), specialist and drug prescriptions.

As of 31st December 2011 about 4,000 electronic medical files were activated in Emilia-Romagna.

In 2012 some services will be available also from the http://www.fascicolo-sanitario.it portal: online payment for services, online booking, choices/repeal notifications of general physician/paediatrician. The download of the medical report from the electronic medical file will be considered as formal transmission of the report, thus speeding up delivery times and reducing costs.

The Patient summary

The Patient summary is one of the documents included in the electronic medical file: it reports the Patient's clinical history and current state of health. It is created and updated by the general practitioner or paediatrician, with the formal consent of the Patient. The permanent availability of this information improves care continuity in chronic diseases and it is important in emergency situations.

Some experimentations on the use of the Patient summary were conducted in some Primary Care Units in the Provinces of Piacenza, Bologna and Cesena, thus allowing to improve the document format.

The electronic medical file for home care

An experimentation on the use of the electronic medical file for home care (ADI Summary) was started in 2011 and will end in 2012; information is collected in a database by health professionals involved in home care to Patients, with the Patient's formal consent. Some data can be taken from the Patient summary.

This system will allow any authorised health professional (specialist, general practitioner, paediatrician, out of hours service doctor, nurse) to access and update the medical file (if a internet connection is available), to take decisions and to immediately inform the Patient and other professionals involved in the care path.

Authorisation and accreditation of healthcare, social-health and social services

Health services

In Emilia-Romagna the authorisation and accreditation process was defined by regional law no. 34/1998 and subsequent amendments. Regulations have been implemented with regional government resolutions since 2004. The aim is to assure citizens with quality of health structures and services. Authorisation is meant to guarantee the respect of structural and safety requirements for Patients and workers in any public or private health facility; accreditation guarantees the respect of quality requirements concerning health structures and professionals working for the Regional Health Service (also structures for education).

The verification process to check that necessary requirements for accreditation have been satisfied has been operational since 2004. The following types of private facilities have already been inspected: hospitals, residences (for psychiatric Patients and substance abusers), hospices and clinics; moreover, public hospital facilities, Mental Health and Pathologic Addictions Departments, and hospices in Local Health Trusts have already been verified. Procedures concerning Public Health and Primary Care Departments are underway.

Social-health and social services

Authorisation for the operation of social-health and social services is issued by the Municipality where the service is based, following deliberation by a special commission. The criteria and guidelines for accreditation and the list of involved services were defined with government resolution no. 772/2007.

The accreditation of public and private social-health and social services aims to ensure high standards of quality of services and facilities. It is based on some foundations:

- the definition of the type and size of service to be accredited is assigned to Health District programming;
- accreditation completely replaces the contracting system; after accreditation is granted, relationships between Municipalities, Local Health Trusts and the managing body will be regulated by a service contract;
- single management responsibility of the accredited service is required;
- employee qualification courses are planned, and the gradual phasing out of devalued and temporary forms of employment.

Regional law no. 4/2008 provides for the introduction of accreditation through a gradual process. In implementing this law the regional government, with resolution no. 514/2009, has defined the general and specific requirements for the accreditation of social-health and social services for the elderly and disabled: nursing home care, day care centres for disabled adults and elderly, residential homes for non self-sufficient elderly, residential socio-rehabilitative centres for disabled adults.

With the definition of the tariff regulations for these types of services, the accreditation system has been in force since 2009.

Up to 2009, temporary accreditation could be granted for services already systematically included in the institutional provision network (temporary accreditation was granted to 915 services with service contracts that will expire on 31st December 2013). If by this date service requirements have been complied with, full accreditation will be granted for 5 years, and will then be renewable for another 5 years.

After 1st January 2011 only temporary accreditation to newly-established services can be granted: the procedure gives priority to public services, whereas for private services a selection is necessary. Provisional accreditation involves a trial period till 31st December 2012, after which full accreditation may be granted. By the end of 2011 temporary accreditation had been granted to 18 new social-health services.

Community Laboratories to improve participation

As indicated in the 2008-2010 Regional Health and Social Plan, "community" has to be considered the centre of policies to implement participation, involvement, listening paths for citizens, to define better welfare policies and to strengthen the interaction between Institutions and population.

Community Laboratories to improve participation

Looking at regional experiences (for example, in the Health District of Scandiano where the community promotes services for the families), the aim is to define operational indications at regional level for local programming in a perspective of community empowerment and participation. To reach this goal, the strengthening of specific competences through some Laboratories is required for people in strategic positions for local programming in Municipalities, Health and Social Local Conferences, Health Districts (145 people). The path is articulated in steps:

- mapping of experiences of community empowerment or of participative decisional processes for welfare policies (2011-2012);
- implementation of the Community Laboratories (May-October 2012);
- definition of the document for the operational indications for local programming in a perspective of community participation (November 2012).

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