

2014 Annual Report

Catalan Health Institute

 Generalitat de Catalunya
Departament de Salut

 Institut Català
de la Salut



► Introduction

In 2014, all eight ICS hospitals increased their major surgery activity by 4.1% and reduced their waiting lists by 34.2%.

Workforce stability, staff professional development and the identification of talent are the main pillars that have centred the plan for improvement in people management.

Strategic alliances with other provider organisations in the territory continue to take us forward.

It is with great pride that we present the Catalan Health Institute's Annual Report for 2014, a year that stood out above all because the targets set by CatSalut in the operating contract were met, there was an increase in major surgery activity of 4.1% with respect to the previous year – with special attention paid to complex cardiac interventions – and a reduction of 34.2% in the waiting list for surgery procedures under guarantee, with specific emphasis on the management of the length of time patients have spent waiting.

With the aim of promoting tertiary care and coordination between the organisation's eight hospitals, during the year 2014 we also gave impetus to the creation of new corporate programmes led by expert clinicians, to share aspects related with patient care, research and teaching in a determined area of specialisation, such as hepatitis or AIDS.

Moreover, to take a step forward in the model of management autonomy for the primary healthcare teams and, above all, with the aim of progressing in aspects where there is room for improvement, work was carried out with the participation of staff from all territories to re-orient the model towards one of professional leadership. Within the plan for the improvement of people management, highlights include actions geared towards increasing the stability of the workforce, professional development and the identification and attraction of talent.

In the year 2014, the institution developed numerous initiatives to promote patients' participation and co-responsibility in the care of their own health. By way of example, some 64% of the primary healthcare teams now offer the Patient Expert Catalunya® (Expert Patient Catalonia) programme. Along these lines, we also started to endorse a new programme promoting rights and duties and participation.

For the ICS, also fundamental are its strategic partnerships and alliances with other providers in the territory, which allow the sharing and unification of services as well as the joint management of patient care processes with the aim of improving coordination between healthcare provision services and optimising the resources available. Within this context, in 2014 we continued to advance in terms of the alliances established in Girona, Lleida and Tarragona.

Other significant strategic projects were the culmination of the integration of the three ICS clinical laboratories in the city of Barcelona (Vall d'Hebron, Manso and Bon Pastor), the comprehensive and integratory approach to the care of fragile and chronically ill patients and the review of the emergency care circuits.

With this compilation of all the activity performed during the year 2014, we wish to undertake an exercise in transparency and, at the same time, reflect the valuable work carried out by each and every one of the institution's professional staff who, with their daily work and commitment to users, citizens and society in general, have made it possible to convert the difficult economic context facing all of us in recent times into an opportunity for strengthening and improving the public health system.

Carles Constante Beitia
Chair of the Board of Directors

Pere Soley Bach
Chief Executive Officer

► All across Catalonia









With a workforce exceeding 38,000 staff members, the Catalan Health Institute is the largest public healthcare services company in Catalonia and provides healthcare to nearly six million users across the whole of its territory. It currently manages eight hospitals (Vall d'Hebron, Bellvitge, Germans Trias, Arnau de Vilanova in Lleida, Joan XXIII in Tarragona, Dr. Josep Trueta in Girona, Verge de la Cinta in Tortosa, and Viladecans) and 287 primary healthcare teams, three of them through a consortium with the Hospital Clínic in Barcelona and a fourth through another consortium with Castelldefels Town Council.

As a leading organisation within the public health system, the goal of the ICS is to contribute towards improving people's health and quality of life by providing innovative and excellent healthcare services, which include both health promotion and the prevention and treatment of illnesses, from the most prevalent to the most complex.







Besides its healthcare activity, the ICS undertakes a great deal of scientific activity through the seven research institutes integrated into its hospitals and primary healthcare centres. In the educational sphere, the ICS trains 2,300 specialists in 51 different health sciences specialities at its centres. It also accepts over 4,500 undergraduate students of medicine, nursing, dentistry and other programmes, while working intensively to provide continuous training for all professional groups.

A day's activity at the ICS

Primary Healthcare

	78,331 family medicine appointments
	14,810 paediatric appointments
	50,153 nursing appointments
	4,213 dentistry appointments
	1,418 social work appointments
	6,146 continuing care appointments
	7,674 ASSIR (Sexual and Reproductive Healthcare) appointments
	521 PADES (Home Care and Support Teams Programme) visits

Hospital Care

	858 discharges
	434 major surgical interventions
	1,957 emergencies
	11,715 outpatient consultations
	1,066 day-hospital sessions
	22 home hospitalisation visits

Primary Healthcare

Structural Resources

- 334 primary healthcare centres
- 648 local treatment centres
- 19 primary healthcare emergency centres (CUAP), 4 of them under shared management
- 128 continuing care points (PAC)
- 20 isolated or mountain emergency treatment facilities
- 27 specialist healthcare centres
- 23 diagnostic imaging services, of which 7 are managed by the Diagnostic Imaging Institute (IDI)
- 2 clinical laboratories

Healthcare Resources

- 287 primary healthcare teams, 4 of them under shared management
- 10 prison primary healthcare teams
- 15 paediatrics lines/paediatric care teams, 4 of them under shared management
- 23 regional continuing care and emergency healthcare units (ACUT)
- 24 sexual and reproductive healthcare services (ASSIR)
- 11 Home Care and Support Teams Programme (PADES) units
- 11 rehabilitation units
- 2 mental health units
- 3 occupational health units
- 6 international health units

Hospital Care

- 8 hospitals
- 141 operating theatres
- 21 recovery room units with 162 care points
- 7 major outpatient surgery (CMA) units
- 24 delivery rooms
- 1,317 outpatient consulting rooms (including treatment rooms)
- 385 day-hospital care points
- 415 emergency bays with 701 care points
- 8 clinical laboratories, 4 territory-based and one for emergencies
- 220 items of high-technology equipment, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Institute of Oncology (ICO)
- 3,562 available beds:
 - 2,962 conventional beds
 - 478 critical and semi-critical beds
 - 122 special care cots
- 3 international health units with 2 care points

Alt Pirineu i Aran

Structural Resources

- 6 primary healthcare centres
- 66 local treatment centres
- 2 continuing care points (PAC)
- 10 isolated or mountain emergency treatment facilities

Healthcare Resources

- 6 primary healthcare teams
- 1 regional continuing care and emergency healthcare unit (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)

Barcelona

Primary Healthcare

Structural Resources

- 45 primary healthcare centres
- 4 primary healthcare emergency centres (CUAP)
- 2 continuing care points (PAC)
- 9 speciality healthcare centres
- 6 diagnostic imaging services

Healthcare Resources

- 53 primary healthcare teams, 3 of them under shared management with the Hospital Clínic
- 2 prison primary healthcare teams
- 9 paediatric lines, one of them under shared management
- 2 regional continuing care and emergency healthcare units (ACUT)
- 4 sexual and reproductive healthcare services (ASSIR)
- 1 Homecare and Support Teams Programme (PADES) unit
- 2 rehabilitation units

Vall d'Hebron University Hospital

- 45 operating theatres
- 4 recovery room units with a total of 38 care points
- 1 major outpatient surgery (CMA) unit
- 6 delivery rooms
- 466 outpatient consulting rooms (including treatment rooms)
- 137 day-hospital care points
- 123 emergency bays with 222 care points
- 1 regional clinical laboratory
- 54 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI)
- 1,072 available beds:
 - 890 conventional beds
 - 137 critical and semi-critical beds
 - 45 special care cots
- 1 international health units with 2 care points

Camp de Tarragona

Primary Healthcare

Structural Resources

- 22 primary healthcare centres
- 75 local treatment centres
- 2 primary healthcare emergency centres (CUAP)
- 10 continuing care points (PAC)
- 1 speciality healthcare centre
- 4 diagnostic imaging services, managed by the Diagnostic Imaging Institute (IDI)

Healthcare Resources

- 20 primary healthcare teams
- 1 prison primary healthcare team
- 2 regional continuing care and emergency healthcare units (ACUT)
- 2 sexual and reproductive healthcare services (ASSIR)
- 3 rehabilitation units
- 1 occupational health units

Joan XXIII University Hospital, Tarragona

- 12 operating theatres
- 3 recovery room units with 15 care points
- 1 major outpatient surgery (CMA) unit
- 2 delivery rooms
- 99 outpatient consulting rooms (including treatment rooms)
- 17 day-hospital care points
- 36 emergency bays with 65 care points
- 1 regional clinical laboratory
- 11 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI)
- 366 available beds:
 - 277 conventional beds
 - 35 critical and semi-critical beds
 - 24 special care cots

Catalunya Central

Structural Resources

- 39 primary healthcare centres
- 112 local treatment centres
- 4 primary healthcare emergency centres (CUAP), 3 under shared management with Igualada Hospital, Sant Bernabé Hospital and Vic Hospital
- 22 continuing care points (PAC)
- 6 isolated or mountain emergency treatment facilities
- 4 speciality healthcare centres
- 3 diagnostic imaging services

Healthcare Resources

- 32 primary healthcare teams
- 1 prison primary healthcare team
- 1 paediatrics line under shared management with the Vic Hospital Consortium
- 3 regional continuing care and emergency healthcare units (ACUT)
- 4 sexual and reproductive healthcare services (ASSIR)
- 1 Homecare and Support Teams Programme (PADES) unit
- 3 international health units

Girona

Primary Healthcare

Structural Resources

- 34 primary healthcare centres
- 115 local treatment centres
- 1 primary healthcare emergency centres (CUAP)
- 22 continuing care points (PAC)
- speciality healthcare centre
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)

Healthcare Resources

- 26 primary healthcare teams
- 1 prison primary healthcare team
- 2 regional paediatrics care teams under shared management with the Sant Jaume d'Olot Hospital Foundation and Campdevànol Hospital
- 4 regional continuing care and emergency healthcare units (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 Homecare and Support Team Programme (PADES) unit
- 1 rehabilitation unit
- 1 occupational health unit

Doctor Josep Trueta University Hospital of Girona

- 11 operating theatres
- 1 recovery room unit with 9 care points
- 2 delivery rooms
- 107 outpatient consulting rooms (including treatment rooms)
- 21 day-hospital care points
- 25 emergency bays with 50 care points
- 1 regional clinical laboratory
- 56 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Institute of Oncology (ICO)
- 364 available beds:
 - 259 conventional beds
 - 85 critical and semi-critical beds
 - 20 special care cots

Lleida

Primary Healthcare

Structural Resources

- 23 primary healthcare centres
- 163 local treatment centres
- 1 primary healthcare emergency centre (CUAP)
- 12 continuing care points (PAC)
- 4 isolated or mountain emergency treatment facilities
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)

Healthcare Resources

- 21 primary healthcare teams
- 1 prison primary healthcare team
- 2 regional continuing care and emergency healthcare units (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 international health unit

Metropolitana Nord

Primary Healthcare

Structural Resources

- 84 primary healthcare centres
- 23 local treatment centres
- 2 primary healthcare emergency centres (CUAP)
- 23 continuing care points (PAC)
- 7 speciality healthcare centres
- 8 diagnostic imaging services
- 1 clinical laboratory

Healthcare Resources

- 64 primary healthcare teams
- 2 prison primary healthcare teams
- 5 regional continuing care and emergency healthcare units (ACUT)
- 7 sexual and reproductive healthcare services (ASSIR)
- 5 Homecare and Support Teams Programme (PADES) units
- 1 rehabilitation unit
- 1 mental health unit
- 1 international health unit

Germans Trias i Pujol University Hospital

- 21 operating theatres
- 1 recovery room unit with 12 care points
- 1 major outpatient surgery (CMA) unit
- 3 delivery rooms
- 109 outpatient consulting rooms (including treatment rooms)
- 71 day-hospital care points
- 71 emergency bays with 102 care points
- 1 clinical laboratory
- 22 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Oncology Institute (ICO)
- 551 available beds:
 - 451 conventional beds
 - 88 critical and semi-critical beds
 - 12 special care cots

Arnau de Vilanova University Hospital in Lleida

- 14 operating theatres
- 4 recovery room units with 29 care points
- 1 major outpatient surgery (CMA) unit
- 4 delivery rooms
- 203 outpatient consulting rooms (including treatment rooms)
- 70 day-hospital care points
- 52 emergency bays with 97 care points
- 1 regional clinical laboratory
- 12 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI)
- 362 available beds:
 - 318 conventional beds
 - 28 critical and semi-critical beds
 - 16 special care cots

Metropolitana Sud

Primary Healthcare

Structural Resources

- 60 primary healthcare centres
- 46 local treatment centres
- 4 primary healthcare emergency centres (CUAP), one under shared management with Castelldefels Town Council
- 21 continuing care points (PAC)
- 4 speciality healthcare centres
- 2 diagnostic imaging services
- 1 clinical laboratory

Healthcare Resources

- 54 primary healthcare teams, one of them under shared management with Castelldefels Town Council
- 2 prison primary healthcare teams
- 2 regional paediatrics care teams
- 3 regional continuing care and emergency healthcare units (ACUT)
- 3 sexual and reproductive healthcare services (ASSIR)
- 3 Homecare and Support Teams Programme (PADES) units
- 3 rehabilitation units
- 1 mental health unit
- 1 occupational health unit
- 1 international health unit

Bellvitge University Hospital

- 27 operating theatres
- 3 recovery room units with 29 care points
- 1 major outpatient surgery (CMA) unit
- 204 outpatient consulting rooms (including treatment rooms)
- 48 day-hospital care points
- 66 emergency bays with 95 care points
- 1 clinical laboratory
- 51 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Oncology Institute (ICO)
- 619 available beds:
 - 522 conventional beds
 - 97 critical and semi-critical beds
- 1 international health unit

Viladecans Hospital

- 5 operating theatres
- 2 recovery room units with 13 care points
- 1 major outpatient surgery (CMA) unit
- 47 outpatient consulting rooms (including treatment rooms)
- 7 day-hospital care points
- 24 emergency bays with 43 care points
- 1 emergency clinical laboratory
- 8 high technology equipment items
- 88 conventional beds available

Terres de l'Ebre

Primary Healthcare

Structural Resources

- 21 primary healthcare centres
- 48 local treatment centres
- 1 primary healthcare emergency centre (CUAP)
- 14 continuing care points (PAC)
- 1 speciality healthcare centre
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)

Healthcare Resources

- 11 primary healthcare teams
- 1 regional paediatrics care teams
- 1 regional continuing care and emergency healthcare unit (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 rehabilitation unit

Verge de la Cinta Hospital in Tortosa

- 6 operating theatres
- 3 recovery room units with 17 care points
- 1 major outpatient surgery (CMA) unit
- 7 delivery rooms
- 82 outpatient consulting rooms (including treatment rooms)
- 14 day-hospital care points
- 18 emergency bays with 27 care points
- 1 clinical laboratory
- 6 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI)
- 170 available beds:
 - 157 conventional beds
 - 8 critical and semi-critical beds
 - 5 special care cots
- 1 international health unit



► Healthcare Activity

Primary Healthcare Activity

		% variation Total 2014/2013	
EAP appointments		36,784,830	1.0
Family medicine		19,347,871	1.4
Face-to-face appointments	At the centre	15,845,657	-1.7
	Home visit	349,450	-1.6
Non face-to-face appointments	Telephone	1,891,723	6.2
	Telematic	1,261,041	51.9
Paediatrics		3,658,071	-0.3
Face-to-face appointments	At the centre	3,443,937	-0.6
	Home visit	1,280	-21.6
Non face-to-face appointments	Telephone	169,443	-1.9
	Telematic	43,411	46.6
Nursing		12,387,910	0.8
Face-to-face appointments	At the centre	10,533,122	0.2
	Home visit	775,079	0.9
Non face-to-face appointments	Telephone	872,964	2.7
	Telematic	206,745	34.1
Dentistry		1,040,734	-1.2
Face-to-face appointments	At the centre	1,012,604	-1.6
Non face-to-face appointments	Telephone	24,487	10.5
	Telematic	3,643	28.2
Social work		350,244	5.3
Face-to-face appointments	At the centre	185,041	4.1
	Home visit	23,970	4.0
Non face-to-face appointments	Telephone	137,942	6.8
	Telematic	3,291	25.8

		% variation Total 2014/2013	
Continuing care and emergency care appointments		2,243,388	3.0
Face-to-face appointments	At the centre	2,047,254	2.8
	Home visit	121,525	0.5
Non face-to-face appointments	Telephone	74,609	12.2
ASSIR appointments		1,895,481	4.0
Face-to-face appointments	At the centre	1,693,346	0.1
	Home visit	11,949	22.7
Non face-to-face appointments	Telephone	86,461	4.3
	Telematic	103,725	164.8
PADES appointments		128,614	49.3
Face-to-face appointments	At the centre	59,297	71.8
	Home visit	34,359	27.8
Non face-to-face appointments	Telephone	34,958	41.5
Mental health appointments		28,198	-16.7
First appointments		2,751	10.8
Successive appointments		25,447	-18.8
International health			
Patients attended		11,791	0.15
Appointments for travellers		11,367	0.15
Appointments for imported diseases		424	0.26
Vaccinations		22,705	0.13

Source: SIAP and PROSICS.

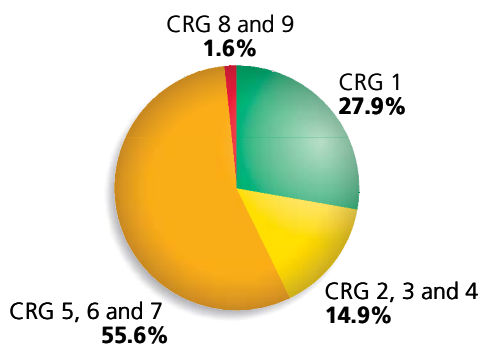


Stratification of the assigned population treated by the ICS's primary healthcare teams during the year 2014

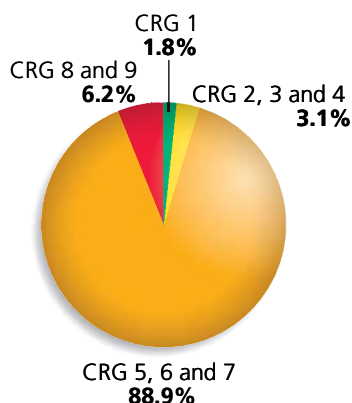
Clinical Risk Groups (CRG)	Assigned population attended to ¹	Pharmaceutical expenditure	Pharmaceutical expenditure (euros per person)	Patients with two or more emergency admissions
CRG 1. Healthy	1,150,470 27.9%	13,925,784.15 1.8%	12.10	2,157 8.0%
CRG 2. Acute illness	61,349 1.5%	2,325,698.16 0.3%	37.91	423 1.6%
CRG 3. Minor chronic illness	404,604 9.8%	11,892,318.88 1.6%	29.39	611 2.3%
CRG 4. Various minor chronic illnesses	150,426 3.6%	9,420,368.03 1.2%	62.62	237 0.9%
CRG 5. Dominant chronic illness	931,336 22.6%	95,707,137.72 12.7%	102.76	2,755 10.3%
CRG 6. Two dominant chronic illnesses	1,299,521 31.5%	505,366,534.2 67.1%	388.89	14,273 53.2%
CRG 7. Three dominant chronic illnesses	61,828 1.5%	68,715,214.93 9.1%	1,111.39	3,628 13.5%
CRG 8. Neoplasms	41,832 1.0%	28,541,654.94 3.8%	682.29	1,810 6.7%
CRG 9. Catastrophic illnesses	24,237 0.6%	17,737,160.86 2.4%	731.82	949 3.5%
Total	4,125,603 100.0%	753,631,871.9 100.0%		26,843 100.0%

1. The population considered is the assigned population attended to that has had at least one appointment during the year with the family medicine, paediatric, or nursing services. Groups 5, 6 and 7 represent 55.6% of the assigned population attended to by ICS primary healthcare during the year 2014. These patient groups generated 88.9% of pharmacy expenditure and, in general, are the patients that make the greatest use of healthcare resources. For this reason, ICS primary healthcare pays special attention to the monitoring of these patients.

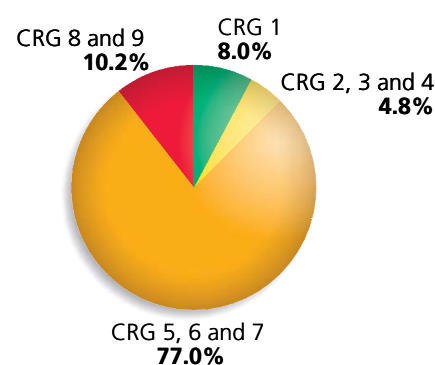
Assigned population attended to



Pharmaceutical expenditure

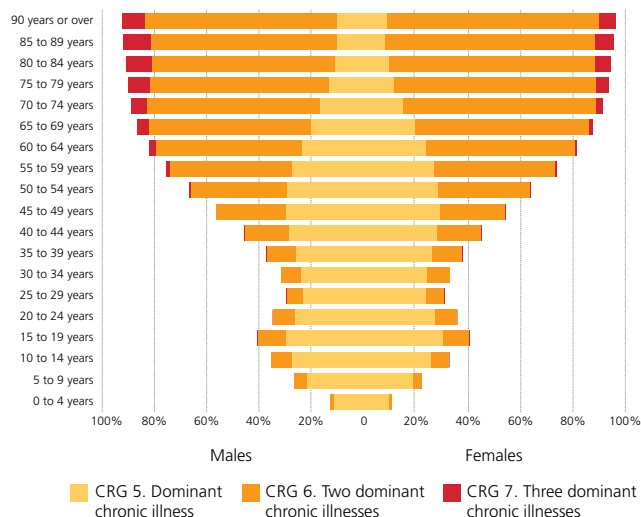


Patients with two or more emergency admissions



Source: ECAP and CatSalut.

Prevalence of important chronic illnesses by age and sex



The prevalence of chronic illnesses increases with age and has a high frequency, in males and females alike, at advanced ages. Furthermore, at these ages, there is a high prevalence of chronic multi-morbidity, in other words, people affected by than one chronic illness simultaneously.

As shown in the graph, over 80% of the population aged 60 years or over attended to at ICS centres suffer at least one important chronic illness, such as, for example, diabetes, hypertension, chronic obstructive pulmonary disease, asthma, or heart failure. Among this population, it is more frequent for two or more chronic illnesses to be suffered simultaneously than one alone.

Source: ECAP.

Synthetic quality indicators

Healthcare Quality Standard

The Healthcare Quality Standard (EQA) is the main tool used by the ICS to assess the quality of the healthcare provided to patients by its primary healthcare teams. The last review, in which 300 professionals participated from all over Catalonia and which was presented in 2014, was the most exhaustive yet and gave rise to a new EQA that reinforces its potential as a clinical management tool.

The new EQA includes 52 indicators referring to the adult population – 20 of which are new – and 30 indicators referring to paediatrics – four of which are new – that identify the main health problems that are tackled from primary healthcare. The indicators of the adult population are classified into 12 categories: cardiovascular disease, type 2 diabetes, arterial hypertension, dyslipidaemia, chronic respiratory obstruction, other chronic health problems, acute conditions, preventive activities, vaccinations, home care, social assessment and quaternary prevention (the latter referring to the set of actions that avoid unnecessary medical interventions).

The new indicators related with preventive activities make reference to reducing obesity, increasing physi-

cal activity in sedentary individuals with cardiovascular risk factors and the reduction of alcohol consumption in high-risk drinkers. As regards quaternary prevention, the new indicators show the de-prescribing of ill-advised treatments, such as that of hypolipidemic agents in patients with low cardiovascular risk, anti-osteoporotic drugs in patients with low risk of fractures and proton-pump inhibitors in patients at low risk for gastric disorders. There are also non-prescription indicators, such as not using statins to treat patients with low cardiovascular risk and not using antibiotics to treat acute gastroenteritis or respiratory viruses.

The following table shows the main clinical indicators in December 2014 in relation to January of the same year, with the number of controlled cases. No variations with respect to the previous year are presented because of the changes explained. The main clinical indicators have improved over the course of the year, which represents an increase in the number of patients who are being better treated or controlled.

	Patients with good control	% of the total of cases	% variation January 2014 / December 2014
Cardiovascular disease			
Treatment with platelet antiaggregants or anticoagulants in atrial fibrillation	72,549	88.17	3.25
Good control of treatment with anticoagulants	42,697	92.42	-0.09
Antiaggregant treatment of ischemic heart disease / CVA	156,048	96.20	1.24
Control of LDL-cholesterol in ischemic heart disease / CVA	78,538	63.32	0.63
Treatments of ischemic heart disease and heart failure with beta-blockers	86,475	73.72	*
Type 2 diabetes			
Foot screening	186,096	67.56	5.84
Control of glycated haemoglobin	190,870	69.29	0.96
Retinopathy screening	148,288	74.14	*
Arterial hypertension			
Control of blood pressure	337,111	71.42	2.16
Dyslipidaemia			
Control of LDL cholesterol in patients with a high cardiovascular risk	26,328	70.88	*

	Patients with good control	% of the total of cases	% variation January 2014 / December 2014
Preventive activities			
Obesity screening between ages 6 and 14	364,519	82.24	2.44
Screening for harmful habits in teens	35,401	75.87	4.41
Physical activity: sedentary with cardiovascular risk factors that improve in the change phase	101,657	42.34	22.45
Reduction of alcohol consumption in high-risk drinkers	18,253	40.92	*
Reduction of weight in obesity and excess weight	193,233	33.13	-2.83
Vaccinations			
Systematic childhood vaccination coverage	681,723	92.04	1.20
Coverage of anti-flu vaccination in children at risk	13,635	31.06	2.08
Flu vaccination in people aged over 59 years	588,621	50.62	0.39
Flu vaccination in the population at risk aged 15 to 59 years	65,322	22.39	4.24
Tetanus vaccination	1,386,236	64.00	2.64
Home Care			
Comprehensive assessment of homecare (ATDOM) patients	41,053	94.98	5.45
Assessment of pressure ulcers risk in homecare (ATDOM) patients	40,136	96.73	3.52

* The variation percentage cannot be calculated because the results are not comparable due to modifications of criteria.

Source: SISAP.



In quaternary prevention, the indicators measure cases with ill-advised prescriptions. Negative variation percentages indicate a reduction in cases with ill-advised treatments, and, therefore, an improvement in the indicator. All the indicators have improved their

results since the start of the year. In some of them, however, the variation percentages cannot be presented because modifications have been introduced in some of the calculation criteria.

	Patients in situations with room for improvement	% of the total of cases	% variation January 2014 / December 2014
Quaternary prevention			
Low cardiovascular risk with ill-advised hypolipidemic agents	158,394	7.78	-4.75
Ill-advised new statins	30,704	1.50	*
Inadequacy of prevention of gastric disorders with proton-pump inhibitors	240,898	58.14	*
Ill-advised treatment in osteoporosis with low risk of fracture	46,955	2.08	-22.79

* The variation percentage cannot be calculated because the results are not comparable due to modifications of criteria.

Source: SISAP.

Pharmaceutical Prescription Quality Standard

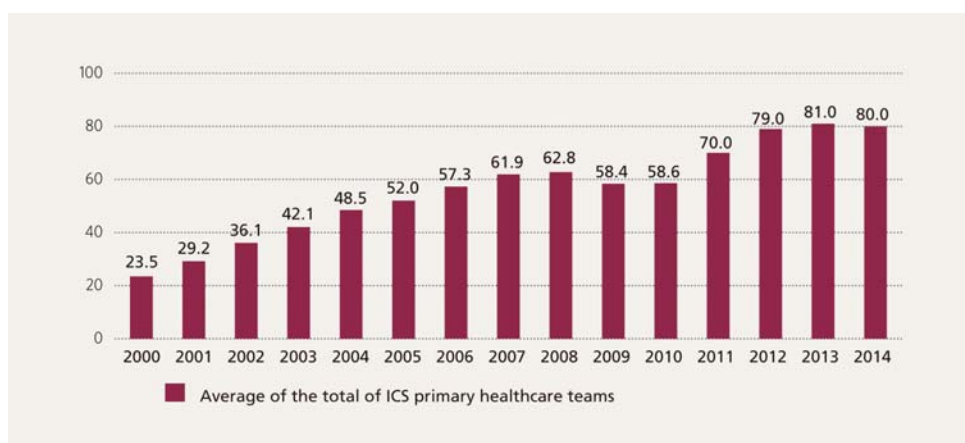
The Pharmaceutical Prescription Quality Standard (EQPF) is a measuring tool that the ICS has used since the year 2000 as part of the process of professional incentivisation for improving quality in the prescribing of medicines in the primary healthcare sphere.

This is a series of indicators produced and reviewed each year by multidisciplinary teams, based on scientific evidence. Its aim is to encourage the use of drugs

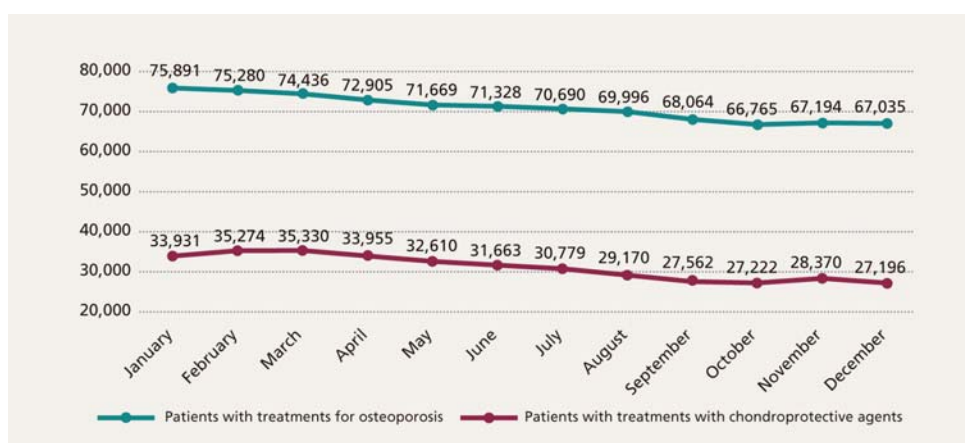
with the best cost-effectiveness as well as to reduce the variability in therapeutic approaches to the most prevalent conditions seen in primary healthcare.

The best results during the year 2014 were produced in the reduction of chondroprotective treatments and in drugs for the treatment of osteoporosis in unsuitable indications.

Achievement of the Pharmaceutical Prescription Quality Standard (EQPF; 2000-2014)



Patients with treatments with chondroprotective agents and for osteoporosis



Diagnostic Quality Standard

The Diagnostic Quality Standard (EQD), a set of indicators aimed at improving quality of the diagnostic record in the primary healthcare medical history (ECAP), which began in 2013, has become consolidated among healthcare professionals, as reflected in

the improvements in results in each of its different dimensions. It must be highlighted that in the year 2015, the different EQD indicators will be integrated into the EQA, therefore the EQD will cease to be calculated as an in-house synthetic standard.

EQD	Result in December 2013	Result in December 2014	% variation December 2013 / December 2014
EQD1. Correct use of the diagnostic register	69.49%	79.65%	14.63%
EQD2. Correlation between treatments and diagnoses	85.45%	88.12%	3.13%
EQD3. Accuracy of new diagnoses	57.75%	64.10%	11.00%
EQD4. Correlation between criteria and diagnoses	69.73%	74.72%	7.16%
EQD5. Diagnostic specificity	27.07%	44.62%	64.83%

Hospital activity

	Total	% variation 2014/2013
Discharges¹	211,945	3.77
Medical discharges	99,487	2.40
Surgical discharges	102,961	4.19
Standard discharges	65,001	3.67
Discharges after major outpatient surgery	37,972	4.89
Emergencies of more than 24 hours	9,499	15.43
Mean weight of discharges (DRG complexity)	1.985	-0.05
Average stay (standard discharges) (days)	6.90	-1.27
Occupation rate (%)	90.42	-0.67
Mortality (%)	2.56	-5.01
Admissions	159,482	3.24
Emergency admissions	103,136	3.16
Scheduled admissions	56,346	3.39
Emergency readmissions in 30 days (%)	5.36	-1.42
Home hospitalisation	5,460	6.08
Day-hospital sessions	263,323	7.74
Outpatient consultations²	2,893,645	-2.76
First appointments	895,184	-3.02
Successive appointments	1,998,461	-2.64
Reiteration rate (%)	2.23	0.39
Major surgery	107,248	4.01
Scheduled standard surgical interventions	46,339	4.40
Emergency standard surgical interventions	19,323	3.00
Major outpatient surgery interventions	41,586	4.04
Outpatient surgery rate ³ (%)	41.73	-0.58
Major outpatient surgery substitution rate (%)	87.23	1.73
Minor outpatient surgery	89,120	1.26

	Total	% variation 2014/2013
Emergencies	714,153	2.52
Level I Resuscitation (%)	0.20	1.61
Level II Emergency (%)	4.86	1.60
Level III Urgent (%)	33.04	10.16
Level IV Less urgent (%)	45.07	8.31
Level V Non-urgent (%)	10.95	0.18
Without triage assigned (%)	5.88	-52.90
Emergencies with hospitalisation	94,521	2.90
Emergencies with hospitalisation / total emergencies (%)	13.24	0.36
Emergencies / day	1,957	2.52
Pressure of emergencies ⁴	64.67	-0.08
Mortality in emergencies (%)	0.17	-8.47
Telemedicine appointments	135,048	4.92
International health⁵		
Patients attended	28,242	0.29
Appointments for travellers	25,536	0.35
Appointments for imported diseases	2,706	-0.07
Vaccinations	55,238	0.35

Source: SAP Asistencial, MBDS and PROSICS. Data extracted in April 2015.

1. Includes emergencies of more than 24 hours.
2. Includes hospital outpatient and primary healthcare consultations.
3. Discharges major outpatient surgery CMA / total surgical discharges.
4. Percentage of emergency admissions / total admissions.
5. Includes the activity of PROSICS Girona, which is undertaken at Santa Caterina Hospital in Salt.



Case mix analysis

The eight ICS hospitals act as basic general and referral hospitals for the population in their catchment areas. The Vall d'Hebron, Bellvitge and Germans Trias are also accredited as tertiary hospitals. These are hospitals that are equipped with high-tech services and have exceptional professional expertise for the purpose of treating health problems that require advanced technological resources and specialised practice. Furthermore, Vall d'Hebron and Bellvitge are referral centres for the whole of Spain with CSUR accreditation, for 20 and nine disorders, respectively.

The five standard ratios presented are a battery of measures calculated based on the data of the hospital discharge report, which have been coded using the International Classification of Diseases, 9th Revision, Clinical Modification (CIM-9-MC) and included in the register of the Minimum Basic Data Set-Acute Care Hospitals (MBDS-AH). In the five ratios the value observed at the hospital is compared with a norm or standard that corresponds to data from the same hospital from the previous year.

	SOR	SASR	SRR	SCR	SMR
Arnau de Vilanova Hospital	0.971	1.002	1.034	1.036	0.917
Bellvitge Hospital	0.978	1.005	1.021	0.996	0.848
Germans Trias i Pujol Hospital	0.993	1.030	1.042	0.881	1.083
Joan XXIII Hospital	0.962	1.006	0.959	0.976	1.043
Josep Trueta Hospital	1.012	0.973	1.041	1.005	1.021
Vall d'Hebron Hospital	1.009	0.995	0.976	0.932	1.012
Verge de la Cinta Hospital	0.973	1.022	1.003	1.210	1.037
Viladecans Hospital	1.010	0.990	0.986	0.919	0.747
Total	0.992	0.997	0.999	0.975	0.966

Period: January-December 2014.

Source: MBDS-AH (AIR).

The **Standard Operating Ratio (SOR)** is the relationship between the observed medium stay and the expected medium stay according to the standard. Values lower than 1 indicate that the hospital requires fewer days stay to attend to its case mix than the standard with which it is compared, in other words, a lower consumption of resources and, consequently, greater efficiency.

The **Standard Ambulatory Surgery Ratio (SASR)** is the relationship between the proportion of major ambulatory surgery observed and the proportion of major ambulatory surgery expected according to the standard. Values higher than 1 indicate that the hospital has a higher ambulatory surgery rate for cases than the standard. The progressive implementation of major ambulatory surgery (CMA) has allowed an increase in the number of procedures and interventions in which patient admission is unnecessary and this has had an impact on the consumption of resources. Overall, the potential for substitution decreases as the complexity attended to by the hospitals increases.

The **Standard Readmission Ratio (SRR)** is the relationship between the number of readmissions observed and the number of readmissions expected according to the standard. Values lower than 1 indicate that the hospital presents fewer readmissions than the standard being used for comparison, i.e. greater quality and efficiency. Readmissions play an important role as

an indicator of quality of care, given that the readmission of a patient to the hospital before 30 days have passed since discharge indicates the existence of some anomaly, either during the prior stay at the hospital or alternatively in the outpatient or home care provided.

The **Standard Complications Ratio (SCR)** is the relationship between the number of complications observed and the complications expected according to the standard. Values lower than 1 indicate that the hospital presents fewer readmissions than the standard being used for comparison, i.e. greater quality and efficiency. The RCE provides information on the complications in the healthcare being received by hospitalised patients. These complications, occurring during hospitalisation, represent a high excess cost which is expressed with an increase in the days of stay, the need for the application of corrective treatments and the high mortality and readmissions rates of the patients that are affected by them.

The **Standard Mortality Ratio (SMR)** is the relationship between the number of deaths observed and the number of deaths expected according to the standard. Values lower than 1 indicate that the hospital presents fewer deaths than the standard being used for comparison, i.e. greater quality.

Most frequent medical DRGs

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
541	Simple pneumonia and other respiratory disorders, except bronchitis and asthma, with major complications	5,469	5,803	2.343
373	Vaginal delivery without complications	5,144	4,970	0.580
127	Heart failure and shock	3,002	3,233	1.422
544	Congestive heart failure and cardiac arrhythmia with major complications	2,922	2,883	3.420
372	Vaginal delivery with complications	2,833	2,878	0.700
014	Stroke with intracranial infarction	1,957	1,876	1.880
088	Chronic obstructive pulmonary disease	1,645	1,778	1.147
557	Hepatobiliary and pancreatic disorders, with major complications	1,514	1,510	3.768
569	Disorders of the kidney and urinary tract, except renal failure, with major complications	1,337	1,459	1.735
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions and headache, with major complications	1,527	1,450	4.430
552	Disorders of the digestive system, except for esophagitis, gastro-enteritis and uncomplicated ulcer, with major complications	1,097	1,163	3.241
243	Medical back-related problems	2,041	1,156	0.785
320	Kidney and urinary tract infections, age > 17, with complications	1,066	1,074	1.052
321	Kidney and urinary tract infections, age > 17, without complications	1,064	1,021	0.682
350	Inflammation of the male reproductive system	1,002	1,011	0.676
589	Bronchitis and asthma, under age 18, with major complications	1,049	989	1.736
203	Malignancy of hepatobiliary system or pancreas	1,011	972	1.825
316	Kidney failure	910	952	1.393
089	Simple pneumonia and pleurisy, age > 17, with complications	850	934	1.313
208	Disorders of the biliary tract, without complications	850	907	0.682

Source: MBDS-AH. Version DRG AP 25.



Most complex medical DRGs with paediatrics

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
602	Neonate, birth weight < 750 g, discharged alive	26	23	42.401
604	Neonate, birth weight 750-999 g, discharged alive	48	50	31.158
605	Neonate, birth weight 750-799 g, expired	13	15	16.641
607	Neonate, birth weight 1000-1499 g, without significant surgical procedures, discharged alive	158	189	13.766
603	Neonate, birth weight < 750 g, expired	13	19	12.937
576	Acute leukaemia with major complications	122	119	12.638
881	Respiratory system diagnosis, with mechanical ventilation for more than 96 hours	156	160	10.749
611	Neonate, birth weight 1500-1999 g, without significant surgical procedures, with multiple major problems or mechanical ventilation for 96 hours or more	68	64	8.303
707	HIV with mechanical ventilation or feeding support	28	16	6.887
782	Acute leukaemia without major surgical procedures, aged > 17, with complications	45	43	6.551
578	Lymphoma and non-acute leukaemia, with major complications	157	160	6.428
794	Diagnosis of significant multiple trauma, with major non-traumatic complications	38	34	6.099
780	Acute leukaemia, without major surgical procedure, age < 18, with complications	48	25	5.481
612	Neonate, birth weight 1500-1999 g, without significant surgical procedure, without multiple major problems	93	116	4.854
882	Respiratory system diagnosis, with mechanical ventilation < 96 hours	265	320	4.643
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions and headache, with major complications	1,527	1,450	4.430
577	Myeloproliferative disorders and poorly differentiated neoplasms, with major complications	101	85	4.156
126	Acute and subacute endocarditis	63	61	4.156
561	Osteomyelitis, septic arthritis and connective tissue disorder, with major complications	167	165	4.149
617	Neonate, birth weight 1500-1999 g, without significant surgical procedures, with multiple major problems or mechanical ventilation for 96 hours or more	39	53	3.851

Source: MBDS-AH. Version DRG AP 25.

As a selection criterion for tertiary care, the 20 most complex medical procedures with a higher DRG weight and a minimum of 10 discharges have been included. A higher DRG weight indicates the need for more healthcare resources.



Most complex medical DRGs without paediatrics

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
576	Acute leukaemia with major complications	79	73	12.638
881	Respiratory system diagnosis, with mechanical ventilation for more than 96 hours	144	145	10.749
707	HIV with mechanical ventilation or feeding support	28	16	6.887
782	Acute leukaemia without major surgical procedures, aged > 17, with complications	45	43	6.551
578	Lymphoma and non-acute leukaemia, with major complications	150	155	6.428
794	Diagnosis of multiple significant trauma, with major non-traumatic complications	35	33	6.099
882	Respiratory system diagnosis, with mechanical ventilation < 96 hours	244	298	4.643
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions and headache, with major complications	1,493	1,415	4.430
577	Myeloproliferative disorders and poorly differentiated neoplasms, with major complications	79	79	4.156
126	Acute and subacute endocarditis	63	61	4.156
561	Osteomyelitis, septic arthritis and connective tissue disorder, with major complications	161	149	4.149
584	Septicaemia, with major complications	692	685	3.816
557	Hepatobiliary and pancreatic disorders, with complications	1,498	1,501	3.768
568	Kidney failure, with major complications	340	340	3.591
123	Circulatory disorders, with acute myocardial infarction (AMI), expired	102	87	3.501
800	Tuberculosis, with complications	38	28	3.467
827	Non-extensive burns, with lesions due to smoke inhalation, complications or significant trauma	39	51	3.445
880	Acute ischemic accident, with use of thrombolytic agent	339	300	3.428
544	Congestive heart failure and cardiac arrhythmia with major complications	2,908	2,872	3.420
540	Respiratory infections and inflammations except simple pneumonia, with major complications	819	829	3.368

Source MBDS-AH. Version DRG AP 25.

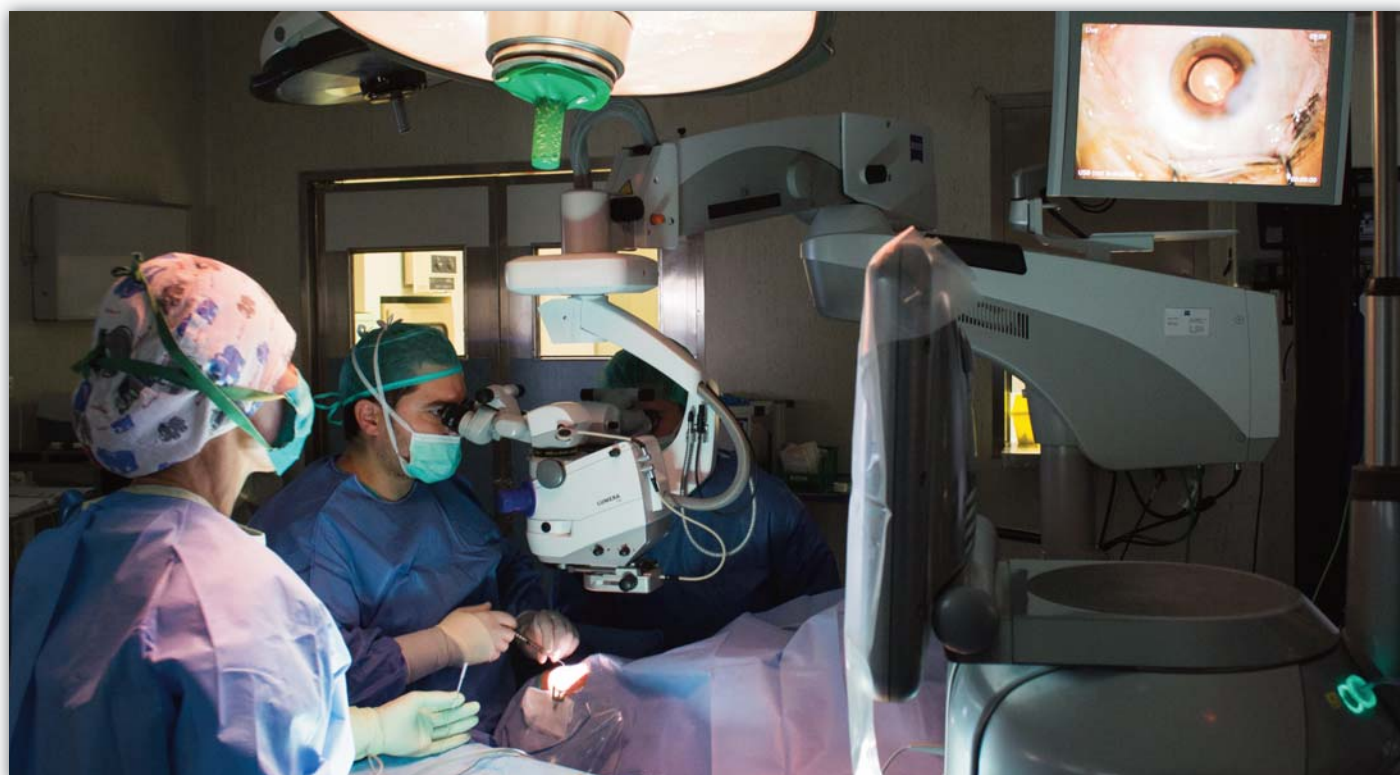
As a selection criterion for tertiary care, the 20 most complex medical procedures with a higher DRG weight and a minimum of 10 discharges have been included. A higher DRG weight indicates the need for more healthcare resources.



Most common surgical DRGs

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
039	Crystalline lens surgery with or without vitrectomy	9,611	10,659	0.917
042	Intraocular procedures, except retina, iris and lens	1,748	1,977	1.074
266	Skin grafting or debridement, except for skin ulcer/cellulitis, without complications	2,106	1,928	1.434
055	Miscellaneous surgery of the ear, nose, mouth and throat	1,674	1,870	0.756
359	Uterine and adnexal procedures for carcinoma <i>in situ</i> and non-malignancies, without complications	1,799	1,792	1.098
169	Mouth procedures, without complications	1,487	1,741	0.874
209	Replacement of major joint, except hip, and reattachment of lower extremity, except due to complications	1,372	1,622	3.279
040	Extraocular surgery, except orbit, age over 17 years	1,544	1,598	0.818
818	Hip replacement, except for complications	1,356	1,510	3.607
371	Caesarean section, without complications	1,456	1,504	0.869
270	Other skin, subcutaneous tissue and breast procedures, without complications	969	1,501	0.967
311	Transurethral interventions, without complications	1,441	1,438	0.803
162	Inguinal and femoral hernia surgery, age 17 and older, without complications	1,335	1,424	0.740
116	Other permanent cardiac pacemaker implants	1,364	1,420	3.591
808	Percutaneous cardiovascular procedures with acute myocardial infarction, heart failure or shock	1,428	1,329	2.701
006	Carpal tunnel release	1,055	1,257	0.690
225	Foot procedures	1,140	1,226	1.241
494	Laparoscopic cholecystectomy, without bile duct exploration, without complications	1,112	1,225	0.962
158	Anal and stoma procedures, without complications	1,357	1,205	0.659
550	Other vascular procedures with major complications	1,061	1,167	5.691

Source: MBDS-AH. Version DRG AP 25.



Most complex surgical DRGs with paediatrics

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
877	Extracorporeal membrane oxygenation or tracheostomy with mechanical ventilation for more than 96 hours	545	495	48.409
103	Heart transplant or implantation of a cardiac assist system	20	26	37.910
606	Neonate, weight at birth 1,000-1,499 g, with significant surgical procedure, discharged alive	19	23	34.042
795	Lung transplant	69	69	34.036
480	Liver transplant and/or intestinal transplant	94	92	31.819
878	Tracheostomy with mechanical ventilation for more than 96 hours or without principal ENT diagnosis, without major surgical procedures	273	284	29.815
803	Allogeneic bone marrow transplant	59	65	23.649
609	Neonate, birth weight 1,500-1,999 g, with significant surgical procedure, with multiple major problems	9	15	18.992
615	Neonate, birth weight 2,000-2,499 g, with significant surgical procedure, with multiple major problems	12	13	17.655
804	Autologous bone marrow transplant	65	58	15.319
545	Heart valve surgery with major complications	378	495	14.133
547	Other cardiothoracic surgery, with major complications	44	41	12.733
622	Neonate, birth weight > 2,499 g, with significant surgical procedure, with multiple major problems	81	54	11.093
530	Craniotomy with major complications	311	324	10.995
850	Defibrillator implant with cardiac catheterisation, without acute myocardial infarction, cardiac arrest or shock	26	10	10.925
793	Surgery due to multiple significant trauma except craniotomy with major non-traumatic complications	83	75	10.431
302	Kidney transplant	275	272	10.337
549	Major heart surgery with major complications	438	461	10.068
851	Defibrillator implant without cardiac catheterisation	67	94	9.466
546	Coronary bypass surgery with major complications	96	104	9.243

Source: MBDS-AH. Version DRG AP 25.

As a selection criterion for tertiary care, the 20 most complex surgical procedures with a higher DRG weight and a minimum of 10 discharges have been included. A higher DRG weight indicates the need for more healthcare resources.



Most complex surgical DRGs without paediatrics

DRG	Description	Discharges 2013	Discharges 2014	DRG weight
877	Extracorporeal membrane oxygenation or tracheostomy with mechanical ventilation for more than 96 hours	537	483	48.409
103	Heart transplant or implantation of a cardiac assist system	14	24	37.910
795	Lung transplant	66	68	34.036
480	Liver transplant and/or intestinal transplant	84	79	31.819
878	Tracheostomy with mechanical ventilation for more than 96 hours or without principal ENT diagnosis, without major surgical procedures	271	279	29.815
803	Allogeneic bone marrow transplant	31	36	23.649
804	Autologous bone marrow transplant	57	56	15.319
545	Heart valve surgery with major complications	370	491	14.133
547	Other cardiothoracic surgery, with major complications	22	23	12.733
530	Craniotomy with major complications	295	309	10.995
850	Defibrillator implant with cardiac catheterisation, without acute myocardial infarction, cardiac arrest or shock	26	10	10.925
793	Surgery due to multiple significant trauma except craniotomy with major non-traumatic complications	82	72	10.431
302	Kidney transplant	262	263	10.337
549	Major heart surgery with major complications	433	457	10.068
851	Defibrillator implant without cardiac catheterisation	64	94	9.466
546	Coronary bypass surgery with major complications	96	104	9.243
579	Procedures for lymphoma, leukaemia and myeloproliferative disorder, with major complications	69	84	9.230
104	Heart valve procedures and other major cardiothoracic surgery, with cardiac catheterisation	35	53	8.726
833	Intracranial vascular procedures, with principal diagnosis of haemorrhage	80	70	8.671
879	Craniotomy with major device implant or chemo implant or principal diagnosis of complex acute central nervous system disorder	176	176	8.626

Source: MBDS-AH. Version DRG AP 25.

As a selection criterion for tertiary care, the 20 most complex surgical procedures with a higher DRG weight and a minimum of 10 discharges have been included. A higher DRG weight indicates the need for more healthcare resources.

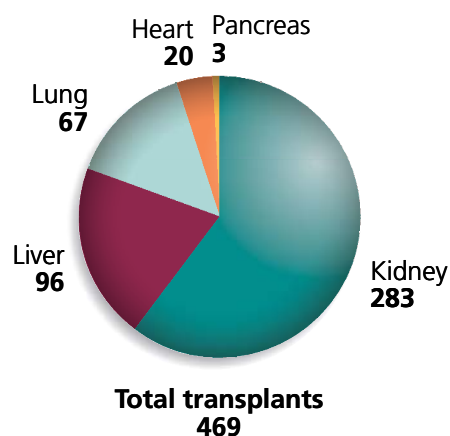


Tertiary and high-complexity procedures

	Vall d'Hebron Hospital Adults	Vall d'Hebron Hospital Paediatric	Bellvitge Hospital	Germans Trias Hospital	Total
Transplants	184	30	194	61	469
Kidney	89	13	123	58	283
Liver	29	14	53	–	96
Lung	66	1	–	–	67
Heart	–	2	18	–	20
Pancreas	–	–	–	3	3

Source: Catalan Transplants Organisation (OCATT).

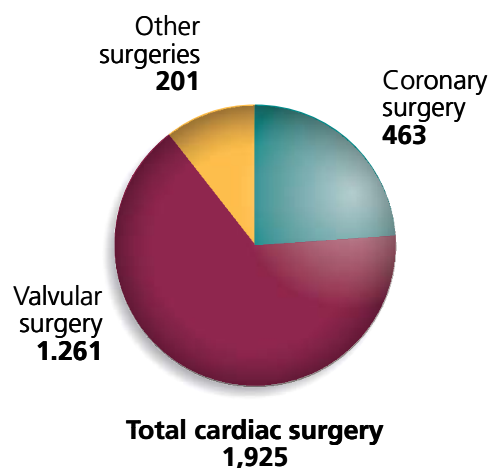
The 469 transplants carried out in ICS hospitals during the year 2014 represent 51.7% of the total transplants carried out in Catalonia. In the case of lung transplants, Vall d'Hebron carried out all of the interventions.



	Vall d'Hebron Hospital	Germans Trias Hospital	Bellvitge Hospital	Total
Cardiac surgery	810*	598	553	1,961
Coronary surgery	218	224	168	610
Valvular surgery	477	356	347	1,180
Other surgeries	115	18	38	171
Parkinson's and epilepsy surgery	–	14	5	19
Parkinson's surgery	–	13	5	18
Epilepsy surgery	–	1	–	1

* Cardiac surgery at Vall d'Hebron includes activity carried out by its staff at Josep Trueta Hospital in Girona.

Source: MBDS.



	Arnau de Vilanova Hospital	Bellvitge Hospital	Germans Trias Hospital	Joan XXIII Hospital	Josep Trueta Hospital	Vall d'Hebron Hospital	Verge de la Cinta Hospital	Viladecans Hospital	Total
Cardiac catheterisations¹	1,466	4,647	2,602	2,000	2,244	3,728	–	–	16,687
Diagnostic	951	2,771	1,755	892	1,462	2,538	–	–	10,369
Therapeutic	515	1,876	847	1,108	782	1,190	–	–	6,318
Interventional radiology²	627	1,720	835	536	428	2,741	22	38	6,947
Oncological surgery									
Bronchi and lungs	42	140	119	47	61	93	–	–	502
Oesophagus	–	40	4	–	14	5	–	–	63
Stomach	12	27	21	14	23	32	–	1	130
Liver metastasis	55	105	40	1	85	54	–	1	341
Pancreas	17	73	21	–	13	32	–	–	156
Rectum	58	126	46	25	79	96	36	22	488
Central nervous system	37	197	78	37	37	93	–	–	479
Other procedures									
Instrumental spinal surgery	99	232	130	93	97	208	30	5	894
Cochlear implants	–	1	14	–	–	6	–	–	21

Source: MBDS.

1. Includes the activity of hospitalisation and of treatment rooms. Verge de la Cinta Hospital and Viladecans Hospital refer catheterisations mainly to the Bellvitge and Joan XXIII hospitals.

2. Includes high-complexity interventional radiology and high-complexity interventional neuro-radiology of levels I, II and III. Source: CatSalut Invoicing.

Waiting lists for surgery

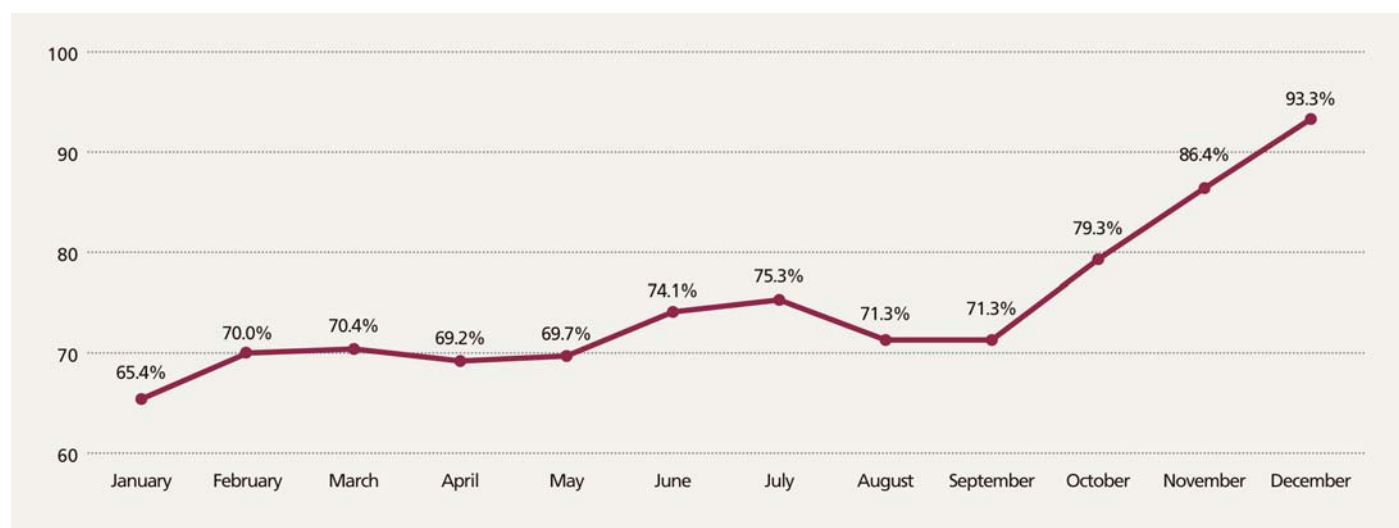
The eight ICS hospitals reduced by 34.2 % the number of patients on waiting lists for surgical interventions for the 14 procedures guaranteed by the Catalan Health Service (CatSalut). Thus, whereas in the month of January 2014, there were a total of 18,729 patients waiting to be operated on for cataracts, varicose veins, hernias, cholecystectomies, arthroscopies, prostatectomies, carpal tunnel, tonsillectomies, circumcisions, hip replacements, knee replacements, hysterectomies, bunions and pilonidal cysts, by 31 December 2014 this figure had been reduced to 12,329 patients.

This improvement was possible due to a very notable increase in surgical activity and the prioritisation of interventions in patients who, in conditions of clinical equality, had been waiting for a longer time. More careful management of the length of time patients had been on the waiting list at all the centres enabled the waiting time to be reduced for surgical intervention. This meant achieving that, in 12 months, the percentage of patients operated before six months increased from 65.4% to 93.3%.

Procedures under guarantee	Patients on the list	Less than 6 months	More than 6 months
Cataracts	4,602	4,582 99.57%	20 0.43%
Varicose veins	478	475 99.37%	3 0.63%
Hernias	793	792 99.87%	1 0.13%
Cholecystectomies	607	607 100.00%	0 0.00%
Arthroscopies	788	784 99.49%	4 0.51%
Prostatectomies	395	395 100.00%	0 0.00%
Carpal tunnel	391	388 99.23%	3 0.77%
Tonsillectomies	429	429 100.00%	0 0.00%
Circumcisions	493	493 100.00%	0 0.00%
Hip replacements	600	478 79.67%	122 20.33%
Knee replacements	1,739	1,069 61.47%	670 38.53%
Hysterectomies	230	230 100.00%	0 0.00%
Bunions	569	568 99.82%	1 0.18%
Pilonidal cysts	215	214 99.53%	1 0.47%
Total	12,329	11,504 93.31%	825 6.69%

Source: SAP Patient Care. Situation as at 31 December 2014. Data extracted in May 2015.

Evolution of % of patients with time spent on the waiting list of below 6 months



Pharmacy

The ICS's strategic objectives in the pharmacy area are to promote the healthy and prudent prescription of medications, to encourage rational, safe and suitable use of healthcare products and medicines, to promote quality, equality of access to and efficient management of the pharmacy service, and to improve the health outcomes of the population.

According to the degree of complexity and multidisciplinary of healthcare, as well as the monitoring of the evolution of the patient's state of health, it is important to differentiate between medications with a prescription dispensed at pharmacies and outpatient medication dispensing by hospitals (OPD), which are

dispensed by the pharmacy services to non-admitted patients in response to a medical order.

The introduction of the electronic prescription, both in primary healthcare and speciality healthcare, has managed to integrate the prescription of the different healthcare levels into a single therapeutic plan, thus favouring a pharmaceutical service of greater quality, that is safer and more sustainable for the whole of the health system.

During the year 2014, primary healthcare and the ICS hospitals prescribed 95.8 million prescriptions dispensed at pharmacies, which represented a total cost to the account of CatSalut of €983.9 M.

Active ingredients most prescribed by cost

Active ingredients	Net amount	% total net amount
Salmeterol and fluticasone	30,004,120	3.33%
Pregabalin	24,182,751	2.68%
Insulin glargine	22,708,934	2.52%
Atorvastatin	19,377,380	2.15%
Tiotropium bromide	16,186,674	1.79%
Formoterol and budesonide	15,567,631	1.73%
Fentanyl	14,735,965	1.63%
Omeprazol	14,605,959	1.62%
Duloxetine	11,807,329	1.31%
Tacrolimus	11,562,178	1.28%

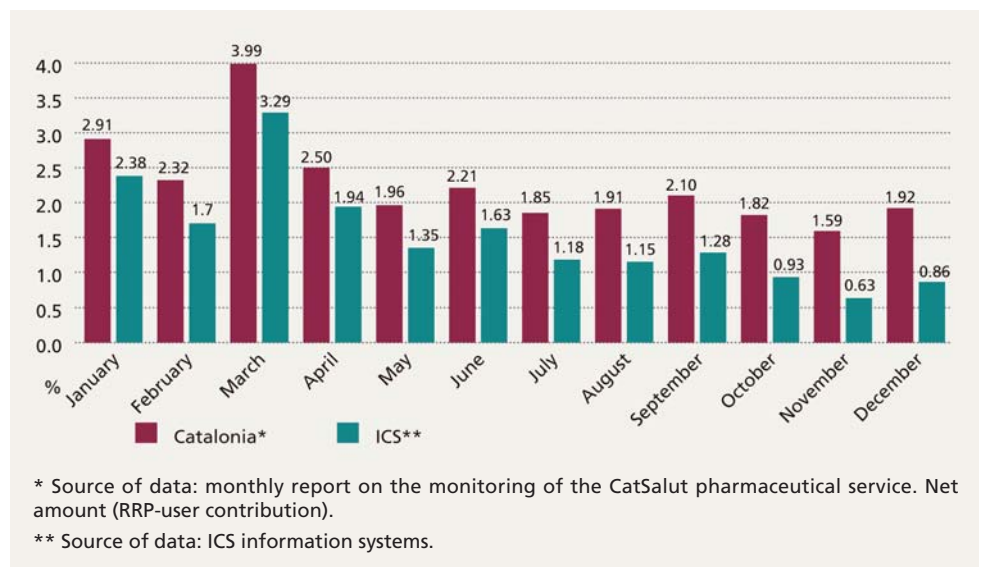
In euros.

Active ingredients most prescribed by packs

Active ingredients	Packs	% total of packs
Omeprazol	6,824,433	7.33%
Paracetamol	4,886,958	5.25%
Simvastatin	4,367,338	4.69%
Acetylsalicylic acid	2,931,551	3.15%
Metformin	2,448,959	2.63%
Enalapril	2,419,563	2.60%
Ibuprofen	1,857,704	2.00%
Lorazepam	1,823,362	1.96%
Hydrochlorothiazide	1,668,376	1.79%
Amlodipine	1,482,212	1.59%

Evolution of pharmaceutical prescriptions at the ICS centres with respect to the total of Catalonia

During the year 2014, expenditure on prescriptions increased by 1.92% in terms of global spending across Catalonia, while in the ICS growth was lower (around 0.86%).



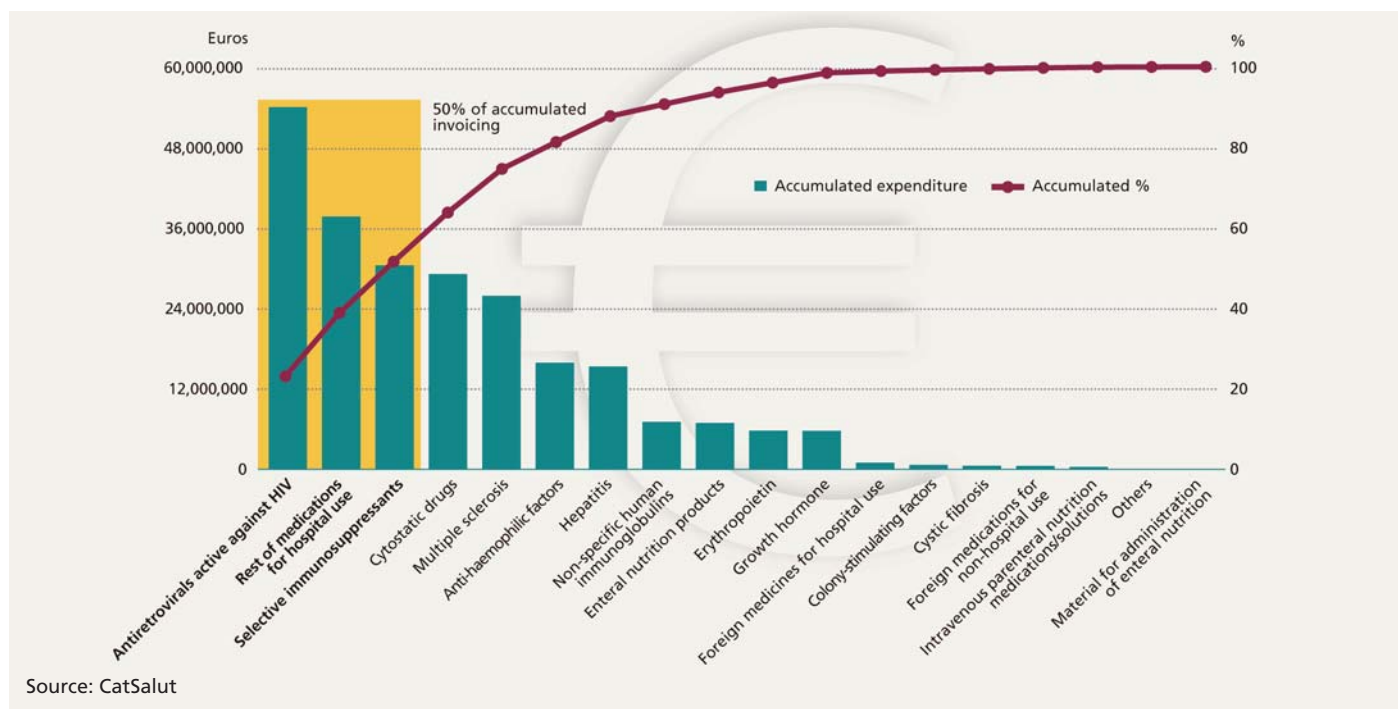
Hospital outpatient dispensing (OPD) medicines

During the year 2014, all the ICS hospitals adopted measures for the rationalisation of hospital outpatient dispensing medicines (OPDs) such as, among others, the creation of experts' committees to deal with specific cases or interventions in certain therapeutic groups, for example the simplification of antiretroviral therapy, the use of biosimilars, and the provision of therapeutic windows in growth hormone administration.

In total, the pharmacy services of the eight hospitals have dispensed OPDs to 43,789 patients, a sum that represents an increase of 6.63% with respect to the previous year. It is important to take into account, furthermore, the appearance of new medications for the treatment of Hepatitis C. In the year 2014, simeprevir

and sofosbuvir were commercialised, and at the start of 2015, so were daclatasvir, dasabuvir and combinations at fixed doses of sofosbuvir/ledipasvir and ombitasvir/paritaprevir/ritonavir. These new treatments, with major results in terms of effectiveness that on occasion actually reach cure rates exceeding 90%, have significantly increased the cost of treatment per patient.

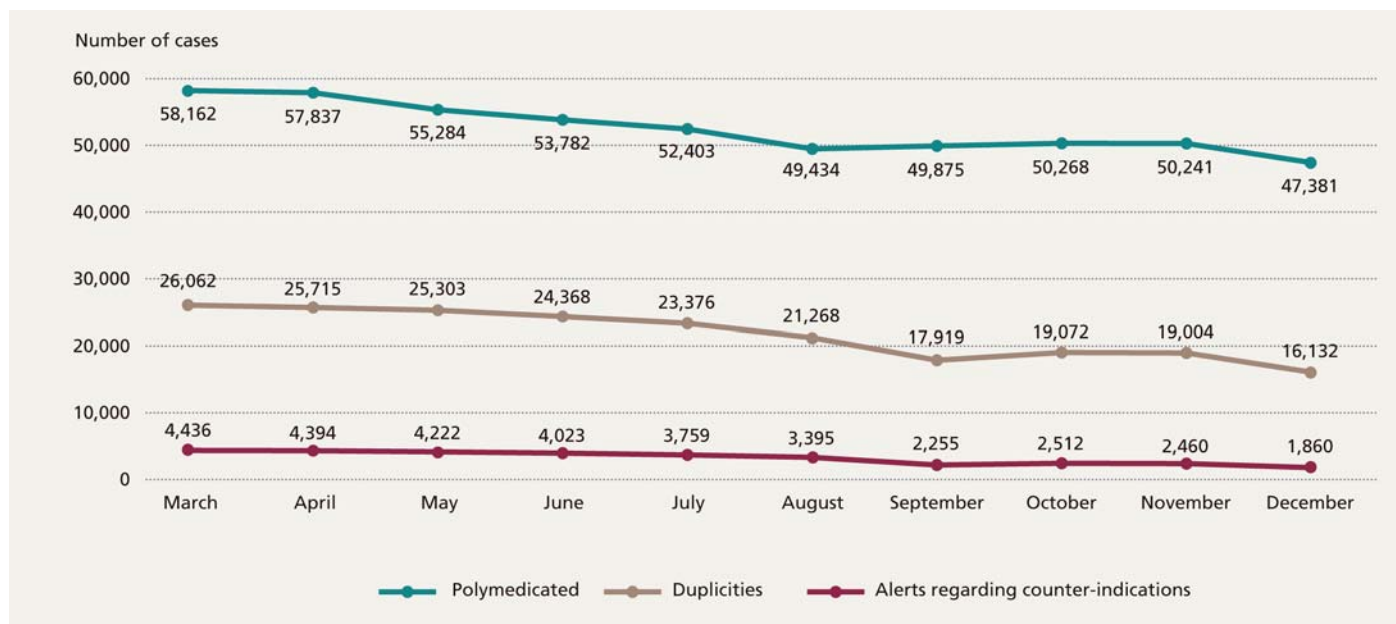
In any event, the consumption pattern of OPDs has maintained a tendency similar to that of previous years. As can be observed in the graph, three therapeutic groups concentrate 50% of the spend: drugs for treating HIV infection, a group of medicines that include treatments for pulmonary hypertension and rare diseases, among others, and selective immunosuppressants.



The Self-Audit reduces duplicities and counter-indications in prescriptions

During the year 2014, the safety indicator included within the ICS management agreements valued three aspects related with the clinical safety of prescriptions: therapeutic duplicities, safety alerts from the Spanish Drugs Agency (AEMPS) and polymedication. Over the course of the year, thanks to the ECAP's self-

audit tool, ICS doctors reduced cases of therapeutic redundancy by 9,930 (-38%). They also resolved 2,576 of the counter-indications related with some drugs that had notifications from the AEMPS (-58%) and they carried out 10,781 de-prescribing actions on poly-medicated patients (-19%).



The PREFASEG incorporates warnings on kidney failure

As a new feature in 2014, the PREFASEG tool offers warnings on drugs formally counter-indicated in cases of kidney failure, which take into consideration abnormal values of glomerular filtration. It also includes the reasons for the counter-indications and makes recommendations on the safest treatment alternatives.

The register of OPD patients and treatments (RPT-SAP) are included in SAP

The RPT-SAP is an instrument that facilitates the monitoring of patients with OPD treatments such as indication, diagnosis and clinical variables. The register, which was incorporated into the Patient Care Argos-SAP of all the ICS hospitals during the year 2014, enables the management and knowledge of hospital medications to be improved with the aim of knowing the results in terms of health outcomes of the treatments prescribed.

Hospitals improve their adherence to the ICS Pharmacotherapy Guide

Adherence to the *Guía Farmacoterapéutica del ICS* (ICS Pharmacotherapy Guide – GFT) aims to adapt treatments to a correct selection of drugs. The indicator that measures adherence to the GFT of hospital prescriptions in medical prescriptions increased from 71.5% in 2013 to 73.2% in the year 2014.

The ICS Pharmacotherapy Committee assesses nine new active ingredients

During the year 2014, the ICS Pharmacotherapy Committee (CFT) continued with maintenance work on the contents of the GFT and it evaluated and established the place in therapeutics of a total of nine new active ingredients: aflibercept (approved), apixaban (approved with restricted use), acridinium bromide (not approved), carbetocin (not approved), crizotinib (approved according to CatSalut criteria), fampridine (not approved), ivabradine (approved with restricted use), loxapine (not approved) and regadenoson (approved with restricted use). In addition, to reinforce the weight of primary healthcare within the Committee, a new work group has been created where the most concerning issues in this area are addressed.

► Financial Management

Budget result for the financial year 2014: income and expenditure

The initial budget assigned to the ICS by the Parliament of Catalonia for the year 2014 was €2,518.65 M. This budget includes as the main source of income (97.41%), the transfers that the ICS receives from the Catalan Health Service (CatSalut) in exchange for the healthcare activity provided by its centres and that is established in the operating contract. A much lower percentage (2.59%) corresponds to income from healthcare services provided to paying third parties and other income and transfers for non-care services such, for example, the repercussions from the spending on spaces shared with other organisations, the continuous training fund, etc.

Over the course of the year, the ICS's in-house income — i.e. income that does not originate from CatSalut transfers — grew from an initial forecast of €65.00 M to a final result of €81.10 M, some 24.77% higher than the initial forecasts. Part of this income (€15.32 M) represented an increase in the expenditure budget (generation of credit due to greater income or for a determined purpose). Therefore, at the close of the 2014 financial year, the ICS has settled revenues for a total amount of €2,536.95 M.

As for the budgetary close of the ICS expenditure for the 2014 financial year, it presents an increase of 0.13% over 2013 (0.4% if we take into account the expenditure of €6.7 M corresponding to the new drugs for the treatment of hepatitis C). Despite this stability in current expenditure, the ICS set up over the course of the year a series of actions thanks to a more efficient management of its resources: action plans for reducing waiting lists, a special plan for heart surgery, assuming of the care services of prison centres during one quarter, contribution to the development of projects in the area of information systems together with the Catalan Ministry of Health and the opening of new primary healthcare centres, being among the most significant. It is also important to highlight the increase in pharmacy spending by €6.73 M, fundamentally centred on outpatient dispensing at hospital pharmacies.

At the same time, in the year 2014 the ICS increased its investments, with the replacement of deteriorated or obsolete healthcare equipment and the updating and improvement of both facilities and care spaces.

These good results were achieved thanks to measures in care management such as optimisation of stays and resources, to the efforts of the workforce and to projects involving unification of the laboratory services,

negotiation of improved prices with suppliers, the internalisation of diagnostic testing, etc.

In summary, the ICS met the obligations arising from its operating contract with the Catalan Health Service in terms of provision of healthcare services, and increased its healthcare activity while maintaining its operating costs through improvements in productivity and efficiency.

Initial Budget 2014	2,518,650,000.00
CatSalut Transfer (assignment)	2,453,650,000.00
Own income (assignment)	65,000,000.00
Budget modifications	18,302,451.52
Transfer from CatSalut (peritoneal dialysis and other healthcare activities)	4,350,000.00
Transfer to CatSalut (OPD oncology Tarragona and Terres de l'Ebre)	-1,179,783.53
Generation of credit through income from:	13,952,451.52
Lleida Provincial Council	4,330,729.00
Tutorial action in postgraduate training	1,181,390.00
Continuous training fund	776,105.32
Research grants	406,000.00
Ministry of Health (transplants)	104,827.98
No-claims bonus	785,172.04
Prison health	7,342,272.96
Others	205,737.75
Final Budget 2014	2,536,952,451.52
Expenditure in the 2014 financial year (liabilities)¹	2,561,726,918.99
Personnel expenditure	1,647,626,994.66
Expenditure on operating goods and services	882,279,371.53
Current transfers	11,826,141.63
Real investments	19,994,411.17
Budget Outcome 2014	-24,774,467.47
Data not included in the budget figures	
New treatments for hepatitis C	6,759,813.40
Revenue raised that has not generated additional expenditure credits	3,562,326.11

In euros.

1. Includes personnel expenditure of the Corporate Centre (€12.5 M), expenditure on running the building and maintenance (€2.4 M) and also other expenditure that affects all the centres but that is assumed in a centralised way from the Corporate Centre (€67.4 M) such as, for example, information technology services, the leasing of medical equipment and the civil liability policy, among others.

Productivity and efficiency indicators

2014 was a year that saw consolidation of the tendency towards improving productivity and efficiency recorded over recent years. Once more, against a scenario of budget restrictions, the continuing effort of its professional staff allowed the ICS's global productivity to increase again by 1.53%. Added to the increases achieved in previous years, this results in each ICS staff member having produced 5% more healthcare activity with respect to 2012. This effort in productivity, combined with other actions in the manage-

ment sphere, has made possible a reduction in the running costs per healthcare unit.

This endeavour, together with that of the previous year, has made it possible for the ICS to reduce its operating expenditure per healthcare unit by over 8%, despite the rise in the cost of healthcare products and the increase in Social Security contributions, among other factors. This saving means that for every euro spent, more healthcare services were offered.

	Productivity UME / healthcare workforce*			Efficiency CAP I+II (without OPD) / UME		
	2013	2014	% variation 2014/2013	2013	2014	% variation 2014/2013
Hospital Care						
Hospital level I	33.21	34.1	2.69	€2,190.90	€2,110.56	-3.67
Viladecans	33.21	34.1	2.69	€2,190.90	€2,110.56	-3.67
Hospitals level II	28.31	29.06	2.66	€2,902.22	€2,800.04	-3.52
Arnau de Vilanova	29.21	30.06	2.9	€2,839.82	€2,639.19	-7.06
Joan XXIII	29.45	30.06	2.04	€2,768.91	€2,779.81	0.39
Josep Trueta	26.3	26.83	2.01	€3,157.80	€3,059.09	-3.13
Verge de la Cinta	28.37	29.63	4.43	€2,805.58	€2,712.29	-3.32
Hospitals level III	23.61	23.82	0.88	€3,542.74	€3,442.26	-2.84
Bellvitge	24.97	26.12	4.59	€3,372.66	€3,198.52	-5.16
Germans Trias	27.34	26.26	-3.95	€3,038.43	€3,060.01	0.71
Vall d'Hebron	21.48	21.62	0.63	€3,889.91	€3,785.25	-2.69
Total hospitals	25.26	25.65	1.53	€3,281.61	€3,178.53	-3.14

* Does not include non-medical staff.

In the primary healthcare area, the incorporation of healthcare staff from the prison institutions from October 2014, as well as the assuming of the supplies of prison pharmacies from the month of January, meant that despite the evident effort made by staff with regard to adapting treatments to meet criteria of safety,

clinical effectiveness and efficiency, an increase occurred in pharmacy expenditure.

Similarly, in terms of running costs, the improvements in efficiency were consolidated but slight increases have been detected in per capita expenditure, basically linked to growing personnel costs in the second half of 2014.

	Net pharmacy expenditure per capita / weighted population attended (age)			Running costs* of primary healthcare per capita / weighted population attended (age)		
	2013	2014	% variation 2014/2013	2013	2014	% variation 2014/2013
Primary Healthcare						
Alt Pirineu i Aran	€220.75	€221.77	0.46	€307.30	€313.80	2.11
Barcelona Ciutat	€234.74	€245.62	4.64	€225.35	€232.70	3.26
Camp de Tarragona	€205.63	€208.89	1.58	€258.38	€250.66	-2.99
Catalunya Central	€206.30	€206.37	0.04	€241.70	€239.56	-0.89
Costa de Ponent	€210.28	€211.30	0.49	€203.44	€204.56	0.55
Girona	€191.37	€196.42	2.64	€203.52	€212.27	4.30
Lleida	€216.51	€214.46	-0.95	€210.62	€211.79	0.55
Metropolitana Nord	€204.61	€209.81	2.54	€207.70	€205.88	-0.88
Terres de l'Ebre	€229.48	€230.82	0.58	€202.01	€208.26	3.10
Total Primary Healthcare	€212.75	€216.86	1.93	€217.55	€219.48	0.89

* Includes staff costs, intermediate products, reagent strips, and supplies.

Improvements to the internal invoicing model

Over the course of 2014, the ICS promoted the development of a protocol for invoicing between the organisation's centres with the aim of providing access to a management tool that, through more careful identification of the activity flows and the resources available at each site, allows progress to be made towards a more efficient and harmonised model.

The potential offered by this tool lies not only in the financial analysis aspects but also it opens up other areas for improvement in organisational procedures and service to the public, such as ordering patient care flows, the incorporation of sustainability criteria and adaptation to existing resources, or the identification of residual productive capacities in order to assume complementary testing within the organisation itself, for example. And all this while advancing, at the same time, along the lines of giving centres a greater degree of autonomy in their management.

During the year 2014, an in-depth review was also carried out of the model in order to achieve its full consolidation and integration into the institution's management systems in 2015.

The ICS is the most active organisation in Catalonia in the use of electronic invoicing

As pointed out in the annual report of the Catalonia Open Administration Consortium, the ICS is the most active organisation in Catalonia with respect to e-invoicing processes. Since 2012, the ICS has allowed the processing of invoices in electronic format because this is the fastest and most secure route that providers and suppliers can use to present them.

Progression in the use of this kind of invoice has been very positive, and during 2014 the number of e-invoices (63,704) represented 20% of the total volume invoiced, a figure that has been growing since the year 2012, when the pilot test was first launched. In previous years, the percentage of e-invoices was 4.75% (2012) and 13% (2013).

During the year 2014, some 300 providers processed their invoices in this format, almost double the number in 2013. The estimate for 2015 is to exceed the figure of 130,000 e-invoices, over 40% of the total. Of nearly 2,000 suppliers that work with the ICS, around 500 present over 50 invoices per year. The ICS's target is that the majority of these companies adopt the use of e-invoicing as soon as possible.

The ICS renews the agreement for assistance in traffic accidents

The ICS, together with the rest of Spain's health services, has renewed its agreement with the UNESPA insurance association relating to providing assistance to wounded parties in traffic accidents. This has allowed an average increase of the tariffs forecast, representing almost 7% for the set of services provided with respect to 2013.

Revenue from the billing of third parties at the ICS centres, which corresponds to healthcare provided by the organisation to people not covered by the public health system and other activities related with healthcare services, increased with respect to the years prior to 2013 to stabilise at over €43 M, despite having fallen 5.5% with respect to that year. It is important to bear in mind that in 2013, due to the set of measures implemented for improving income originating from third parties, a very significant increase was reached in relation to the results of previous years.

The aim is to be equipped with a management tool that enables the organisation to advance towards a more efficient and harmonised model.

The number of e-invoices processed in 2014 represented 20% of the total volume of invoicing.

The ICS's revenue from third-party invoices stabilised at €43 M.

► Strategic Projects

In the year 2014, ICS hospitals achieved a 34% reduction in surgery waiting lists for procedures under guarantee

Priority was given to interventions among those patients that, in conditions of clinical equality, had spent the longest time waiting.

More precise management of the time spent on waiting lists enabled 93.3% of patients to be operated within less than six months.

In the year 2014, the eight ICS hospitals achieved a reduction of 34.2% in the number of patients on the waiting list for surgical interventions in the 14 procedures guaranteed by the Catalan Health Service (CatSalut). Thus, whereas in the month of January 2014, there were a total of 18,729 patients waiting to be operated on for cataracts, varicose veins, hernias, cholecystectomies, arthroscopies, prostatectomies, carpal tunnel, tonsillectomies, circumcisions, hip replacements, knee replacements, hysterectomies, bunions and pilonidal cysts, by the month of December this figure was down to 12,329 patients.

This improvement was possible thanks to a very notable increase in surgical activity and the prioritisation of interventions in patients that, in conditions of clinical equality, had spent the longest time waiting. More precise management of the length of time spent on the list has allowed the waiting time for interventions to be reduced. This meant that, over the course of 12 months, it was possible to achieve a major increase in the percentage of patients operated within six months, up from 65.4% to 93.3%.

Reduction in the waiting lists is one of the main priorities of the ICS, in line with the targets of the Catalan Ministry of Health. In this sense, at the start of 2014, the ICS launched a specific management plan and agreed with each hospital the maximum waiting time that could be reached for each of these 14 procedures, always taking into account the capacities and possibilities of surgical reorganisation at each centre and the need to meet budgets.

To help improve waiting list management, the ICS has also introduced at all its centres a management support tool based on business intelligence technology. Among other features this application allows users to check, on a daily basis, updated information on patients on the waiting list, and where applicable, to establish the necessary corrections in any possible deviations from the set targets.



ICS tertiary hospitals increase the number of complex heart surgery interventions by 26%

Around 26% more activity in complex heart surgery at Vall d'Hebron, Bellvitge and Germans Trias hospitals led to a reduction in the number of people on the waiting list for high-precision operations in this speciality. In total, during the year 2014, the three ICS hospitals performed 1,961 operations, 400 more than the previous year (1,561). Some 70% of these interventions correspond to valvular surgery, 20% to coronary surgery and 10% to other types of major heart surgery. The figures also include operations performed at Josep Trueta Hospital by surgeons from Vall d'Hebron.

By centres, the heart surgery activity is distributed as follows: Vall d'Hebron performed a total of 810 interventions (83 of these at Josep Trueta), Germans Trias, 598 and Bellvitge, 553. This type of intervention requires highly-specialised technical equipment and highly-qualified medical professionals. The three ICS tertiary centres are a reference point in complex heart surgery for the whole of Catalonia, together with the Clínic and Santa Creu i Sant Pau hospitals, and they play a fundamental role in controlling waiting lists for procedures of this type.

Thanks to the launch of the special plan to reduce waiting lists, by the end of 2014 practically no patient had to wait longer than three months. The number of people on the waiting list to be operated was also reduced by two thirds with respect to the previous year. Consequently, from the 444 patients who were on the waiting list in December 2013, by the same date in 2014 the number had fallen to 171.

Expert clinicians lead the new corporate programmes in hepatitis, anaesthesia and AIDS

One of the ICS's strategic projects is to promote tertiary care services and coordination between the organisation's eight hospitals. Within this context, during 2014 impetus was given to the creation of new corporate programmes, led by expert clinicians, to agree common strategies regarding aspects related with patient care, research and teaching in a determined area of specialisation.

The corporate programmes that were activated are:

- **Hepatitis Programme** This programme is led by Ramon Planas, head of the Digestive System Service at Germans Trias i Pujol, and constituted by specialists from the eight hospitals who share knowledge on the subject and common approach strategies.
- **Pre-op Process in Anaesthesiology Programme.** This programme is led by Domingo Blanco, head of the Anaesthesia Service at Viladecans Hospital, and formed by 12 professional anaesthetists who agree common pre-op protocols.
- **AIDS and Associated Diseases Programme.** This programme is led by Bonaventura Clotet, head of the HIV Unit at Germans Trias i Pujol and director of the IrsiCaixa AIDS Research Institute. It has one expert from each centre and its main task is to identify new needs in care for patients with HIV, from optimisation of the record of cases treated and adaptation of the information systems to how the AIDS care units at each centre are configured.

In the year 2014, Vall d'Hebron, Bellvitge and Germans Trias performed 1,961 operations, some 400 more than the previous year.

The aim is to promote tertiary care services and coordination between the organisation's eight hospitals.



In 2015, the plan is to develop more programmes linked to specialities such as general and digestive surgery, cardiology, intensive medicine and paediatrics.

The new organisation of the EAPs includes the profile of one EAP manager for resources management and of one clinical leader for each area of knowledge.

These programmes are added to the International Health Programme (led by Israel Molina, specialist consultant at the Infectious Diseases Service of Vall d'Hebron) and the Cerebrovascular Diseases Programme (led by Antoni Dávalos, clinical director of the Department of Neurosciences at Germans Trias i Pujol), which have been running for several years.

During the year 2014, the PROSICS International Health Programme increased its healthcare offering with respect to 2013. In addition, experts from the programme took on the task of coordinating the training of healthcare personnel, both from the ICS and other provider organisations, to tackle possible cases of haemorrhagic fever caused by the Ebola virus. They also organised the 8th Catalan Conference on Tropical Medicine and International Health. Within the research sphere, the publication should be highlighted of the first clinical trial of a new medication to treat Chagas disease in the prestigious *New England Journal of Medicine*.

As regards the Cerebrovascular Diseases Programme, during 2014 the corporate shared rota for the on-call care of complex stroke cases assessed 21 patients per month of which 11 each month underwent an endovascular treatment with thrombectomy. The on-call team also attended 42 teleconsultations per month by videoconference with regional hospitals in Catalonia, recommending thrombolytic treatment at the local hospital for one in every five cases consulted. In addition, the need for referral to a tertiary care centre for endovascular treatment was indicated for one of every 10 patients assessed. In the clinical research sphere, research has been carried out into new diagnostic biomarkers for stroke and staff professionals at the tertiary care centres have demonstrated the efficacy of endovascular thrombectomy for the treatment of acute stroke in a study published recently in the *NEJM*. During the year 2015, there are plans to incorporate subarachnoid haemorrhage into the programme in order to offer continuing and comprehensive medical, endovascular and surgical action for all cerebrovascular conditions.

The model for management autonomy in primary healthcare is reoriented towards a professional leadership model

With the aim of taking a step forward in the management autonomy model in primary healthcare teams and, above all, with the intention of progressing in those aspects in which the project presents room for improvement, the ICS promoted a work task in which 200 staff members from all regions and professional categories participated.

Through specific groups, the principles on which the management autonomy project was based in 2009 were reviewed. In addition, each of the instruments that were developed at that time to be able to implement the project were analysed together with the degree of response each has had in the different territories. New instruments were also proposed.



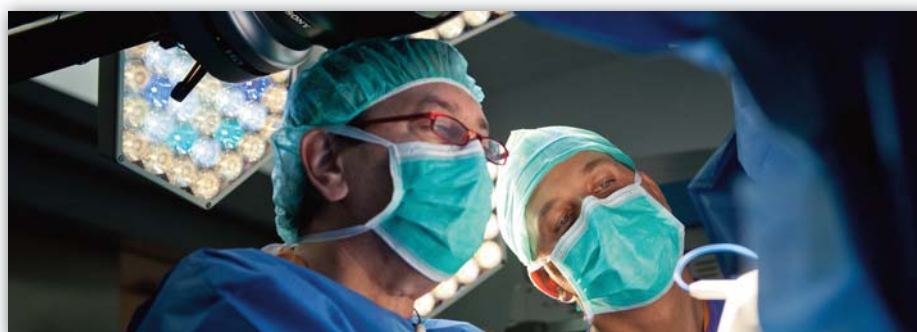
Once the key points were identified for the new organisation of the EAPs, which include the profile of one EAP manager for resources management and of one clinical leader for each area of knowledge, the functions of both profiles were examined along with the competencies necessary to give them the maximum degree of management autonomy and place emphasis on professional leadership. During the year 2015, the way of optimising and simplifying management structures above EAP level will be analysed.

The new ICS professional leadership model is based on increasing case resolution at the primary healthcare level – with closer territorial interlocution to allow decisions that offer value to citizens to be taken where the interaction takes place, with the empowerment of staff and recognition of their clinical leadership being fundamental – and in the integrated and coordinated work between a territory's different providers in order to guarantee continuity of care, while ensuring the efficiency and sustainability of the system.

Management agreements in 2014 made a positive impact by improving quality and patient safety

The agreements of 2014 for the ICS hospitals increased the importance attached to the quality area to 65% of the total. Specifically, indicators were incorporated for achieving targets related to surgery waiting lists, both for the 14 guaranteed procedures and the 49 monitored procedures. Value was also attached to meeting waiting-time targets for conducting the most important diagnostic tests. Other priority aspects, such as the tackling of chronic conditions and emergency services, were also present in the management agreement. Thus, there was an assessment of the number of hospital stays of patients with a degree of chronicity and a high risk to promote personalised and integrated actions between specialised care and primary healthcare in order to prevent patients becoming acutely ill and requiring hospitalisation. Also in the sphere of chronic illness, but in the organisational improvement area, hospitals were asked to develop a project for cross-disciplinary management of chronicity by processes. As regards the emergency services, maximum targets were established in terms of the number of patients awaiting assignment of hospital beds first thing in the morning and of the average length of stay in the accident and emergency department. A request has also been made to produce a processes-management project that analyses the different emergency services, patient flows and the resources necessary throughout the hospital.

The 2014 management agreements also dealt with the monitoring of prescription safety and quality indicators and with the targets of the variable part of the operating contract. In the sphere of patient safety, new indicators were introduced such as the record of intra-hospital falls, the register of surgical validation and the register of incidents using the Catalan Ministry of Health's TPSCloud tool.



The management agreements are a key element in the transmission of the company strategy at the most operative level, defining fundamental targets that must be reached in three areas: sustainability; patient safety and care activity, and organisational improvement.

Staff members are distributed between ten prisons and three juvenile justice centres, through which some 15,000 inmates pass each year.

With respect to primary healthcare teams (EAPs), and including services for sexual and reproductive healthcare, monitoring continued of synthetic indicators of care quality, diagnosis and pharmaceutical prescription, although the composition of the indicators was modified and expanded with new parameters. The main new features were the registration of the Plan for Shared Individualised Intervention in complex chronic patients and in patients with advanced chronic illness, and self-assessment in line with the Catalan Ministry of Health's accreditation model to prepare the primary healthcare team accreditation process that will commence in 2015.

The results in primary healthcare were excellent, with a mean average of 85.4 points and a median of 88.11 owing to the fact that, apart from quality and organisational improvement targets, the budgetary balance targets were also reached. As regards the hospitals, it is important to highlight the results in waiting lists for the 14 guaranteed procedures in which six out of eight hospitals reached 100% of the targets set. As regards the remaining quality targets, an average of 70% was attained. Also noteworthy is the 100% in performance of the CatSalut operating contract at seven of the eight hospitals, which indicates that all requested activity is being undertaken.

Healthcare workers at prisons now form part of the ICS primary healthcare network

The 280 family physicians, nurses and nursing auxiliaries that work in the prison and juvenile justice services in Catalonia now form part of the ICS's healthcare network. This integration has allowed an increase in the quality and safety of the healthcare offered to inmates, also guaranteeing care continuity and clinical monitoring of these patients inside and outside the prison.

This change also makes possible the provision of more comprehensive healthcare for all inmates, who have access to the same list of care services that any user of a primary healthcare centre would have, including community health prevention activities and monitoring programmes for chronic and acute conditions. Furthermore, it is planned to incorporate the figure of the liaison nurse to guarantee the monitoring of the health problems of inmates once they start life outside of prison.

With the objective of facilitating the daily work of prison healthcare professionals, the ICS has adapted the primary healthcare clinical workstation (ECAP) so that they can monitor and record all data related with the health of inmates, including those specific to the prison environment itself, such as, for example, the medical revisions at each admission, the supervision of isolation and containment measures, and the control and treatment of people admitted to the prison infirmary. Furthermore, staff may also use the electronic tools for aiding prescription, such as PREFASEG, the clinical practice guides, the therapeutic guide or the Self-Audit, with the consequent improvement in the efficiency and safety of medical prescriptions. They also have access to the Shared Medical History of Catalonia.

Thanks to this integration, the 280 staff may opt for the professional career route and sign up for the organisation's training offers. Thus, each prison will have its own prison primary healthcare team, which provides service to the entire prison population at the centre, while healthcare staff members at juvenile justice centres are attached to the primary healthcare team that corresponds to the prison centre according to territory.

Successful culmination of the merging of the Manso, Bon Pastor and Vall d'Hebron laboratories

In 2014 the third and final phase of the merger of the Vall d'Hebron, Manso and Bon Pastor laboratories into a single physical space was completed, giving rise to the most important public referral laboratory in the whole of Spain, with 8,780 m² approximately of total surface area distributed in three adjacent buildings.

The Vall d'Hebron Clinical Laboratories include the services of Biochemistry, Haematology, Microbiology, Immunology, Anatomical Pathology and Genetics, with a high degree of tertiary services and a central laboratory (Core Lab) where the most advanced automation technology has been implemented, allowing better control and faster processing of samples, with sufficient capacity to generate up to 120,000 results per day. All of this will allow the response time to be improved and will result in better management of both intra-hospital and extra-hospital patients.

This is another step forward in the process of territorial unification of the ICS's clinical laboratories. The project, which was launched in 2011 and is expected to be completed in 2015, proposes to decrease progressively from the initial 12 laboratories to six territorial clinical laboratories in a network, with the aim of optimising resources management, strengthening economies of scale, integrating information systems and improving the efficiency of hospital and primary healthcare laboratories to enable them to be more competitive.



The ICS Territorial Laboratory in Camp de Tarragona and Terres de l'Ebre integrates its information systems

The Territorial Clinical Laboratory of Camp de Tarragona and Terres de l'Ebre has unified the information systems of the units it has at the Joan XXIII and Verge de la Cinta hospitals. This integration has allowed the implementation of a common quality system with a single certification that guarantees total transferability of the analytical data, the use of common procedures and an improvement in efficiency and in the service to citizens in the territory.

The new laboratories have been fully operational since September, when they started attending to over 6,000 requests per day, a sum that represents the reception of 15,000 to 18,000 samples and processing of 65,000 determinations.



The regulatory change allowing the hierarchisation of the ICS hospitals' emergency services is approved

In the month of October, the ICS Board of Directors approved a change in the conditions necessary for the hierarchisation of its hospital services, regulated by the Order of 18 November 1985, revised in the year 1992. This Order linked the hierarchisation of the ICS services to a speciality. The fact that emergencies is not recognised as a speciality in Spain, when it is recognised in 17 European countries, prevented the Hospital emergency services (SUH) from having the same control structure as the rest of hospital services. Ultimate responsibility for each SUH of the ICS until now lay with the figure of the coordinator.

The importance of this regulatory change lies in the fact that it recognises a pre-existing reality, in other words, that at the SUH there are professionals from more than one speciality with common care, teaching, research and management objectives and that, therefore, have the structure of a service with a manager at its forefront.

The hierarchisation of these services allows the promotion of the development of an in-house care model, gives stability to workforces and makes the professional career of the medical staff working in them much more attractive. Moreover, with the change, the ICS emergency services have become pioneers in this recognition of emergencies as a speciality, when compared with the public hospitals of other autonomous communities in Spain.

The ICS Girona-IAS strategic alliance advances with its first incorporations

Over the course of 2014, the strategic alliance between ICS Girona and the Institute of Healthcare (IAS) started to give its first results with respect to the integration of certain processes, especially healthcare activity support structures.

The most important was the implementation of Argos – the clinical workstation used by all ICS hospitals and based on SAP technology – at the IAS, both in the sphere of speciality care and also in social and mental health care. This integration of the computer systems has allowed professionals of both institutions to safely access the electronic and single clinical history of the patients, with the set of information associated to the diagnostic and therapeutic processes of their health history. At the same time, it has also allowed administrative management to be unified. The integration of the information systems has continued with the implementation of the Gacela Care program, a computer program for nursing care integrated into the SAP.

Moreover, during spring 2014, the management of primary healthcare was integrated at the two institutions, formed by the 26 ICS primary healthcare teams (27 with the incorporation of the Puig d'en Basses prison team) and the three of the IAS. The aim here is to harmonise care for citizens on this care level and pay special attention to improving case resolution as well as the approach to chronic patients.

As regards the integration of the healthcare resources of Dr. Josep Trueta University Hospital in Girona and Santa Caterina Hospital in Salt, this year the care coordinators were defined for the 20 integrated services, as well as the 13 that exist at only one of the two hospital centres.



The laundrette, samples couriering and transport, security, and cleaning services have also been unified, which will allow an estimated annual saving of nearly half a million euros.

The Board of Directors of the ICS agrees on the institution forming part of the new Lleida Pirineu Comprehensive Healthcare Consortium

In the month of October, the Board of Directors of the ICS gave its approval to the signing of the regulatory agreement for the creation of the Lleida Pirineu Comprehensive Health System (SIS) public consortium, of which the institution will form part. This body will group together the public healthcare of the comarcal regions of Lleida and Pirineu, with the participation of the University of Lleida (UdL) and the main centre for research and innovation in the health sphere, the Biomedical Research Institute of Lleida (IRBLleida).

The aim of the SIS Lleida Pirineu is to improve coordination and operations of all the territory's care services (healthcare, social and residential care, and mental health care), to optimise the resources available, to give greater impetus to primary healthcare, to increase decision-making capacity in the territory and to improve funding.

The creation of this new organisation responds to the Government Agreement of 25 February 2014 which establishes the explicit mandate for CatSalut to unify, under public ownership, all the care services managed by the provider organisations of the public sector in the sphere of the healthcare regions Lleida and Alt Pirineu i Aran.

The TGN Salut strategic alliance is advancing with the creation of territorial functional units for seven specialities and processes

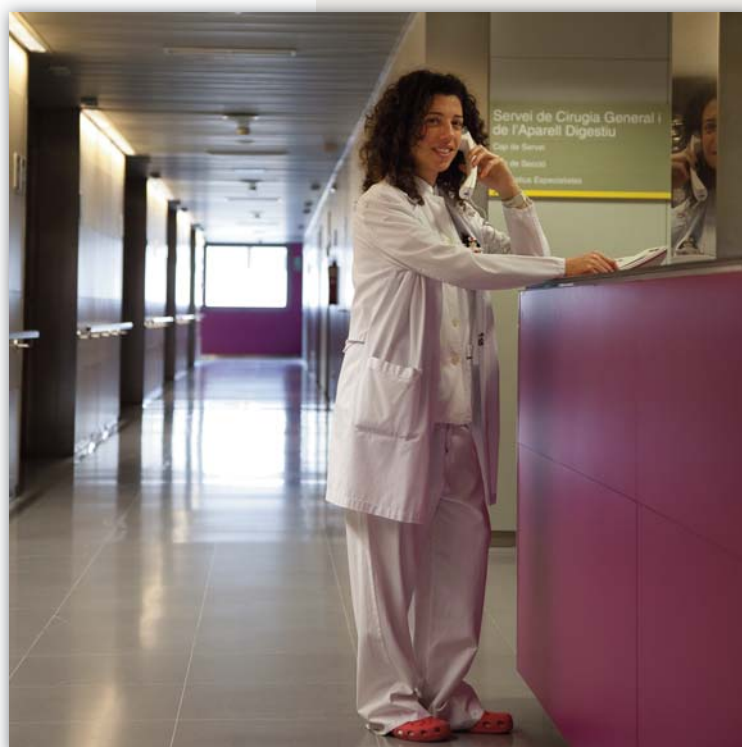
The strategic alliance between the ICS Camp de Tarragona, GIPSS and the Santa Tecla health network took a significant step forward during the year 2014 to improve collaboration and cooperation in health matters in the comarcal regions of Tarragonès and Baix Penedès.

Specifically, territorial functional units have been created for the processes of home care and continuing care and emergency care, as well as specialities such as obstetrics and gynaecology, paediatrics, orthopaedic surgery and traumatology, physical therapy and digestive system and general surgery.

In addition, coordinators were appointed for each of these units, selected by the staff of the three organisations.

The consolidation of TGN Salut has the objective of making the most of synergies in those healthcare services and programmes where it is feasible to rationalise equality in access, efficacy in management and improved quality of service.

The aim of this public consortium is to improve the efficiency, coordination and case resolution capacity of all the healthcare services in the territory.



► Healthcare innovations and improvements

Primary healthcare monitoring of people living in old people's homes reduces hospital admissions by 27% and visits to emergencies by 16%

The GeriàtrICS Programme has obtained excellent results in territories where it has already been implemented.

The number of polymedicated patients has also been reduced due to personalised monitoring and close contact with healthcare staff at residential centres.

Better health control and better quality of life. The first results of the Programme for monitoring people who live in old people's homes, the Geriàtrics Plan, show that the increase in health control of these patients is key in achieving better results in relationship with their health. According to the latest data from the Metropolitana Nord area, where the project was first launched, in those old people's homes where this protocol is already being applied, there has been a 27% reduction in hospital admissions and a 16% reduction in visits to emergencies.

The GeriàtrICS Programme is based on proactive care for residents, especially those affected by complex chronic conditions. To achieve this objective, the primary healthcare teams of reference for each old people's home are in contact with the healthcare heads of the facility in order to coordinate the healthcare services required by residents, accompany them during the final stages of life and improve the efficiency and safety of the pharmaceutical prescriptions that they receive. Precisely with regard to the latter aim, the data are also very satisfactory, given that in the last two years the average of medications prescribed per person has fallen from twelve to six.

The care model proposed by the GeriàtrICS Programme for the health control of people living in care homes is based on actions tailored to the patient. Consequently, the ICS professionals develop an entire series of actions directed towards anticipating and controlling possible decompensations or deteriorations in health, including travelling to the centre in case of emergencies or acute relapses of patients. At the same time, the healthcare professionals working at the care homes have at their disposal all of the necessary clinical information thanks to the connection with the primary healthcare clinical workstation (ECAP).

In total, the ICS provides this service at 172 homes with 8,961 places in the Barcelonès Nord i Maresme, Vallès Oriental, Vallès Occidental and Camp de Tarragona. During the year 2015, the GeriàtrICS Programme will be extended to the entire territory.

This project is set within the framework of the Health Plan 2011-2015, in the action lines that promote accessibility, case resolution and healthcare quality, efficiency and the satisfaction of citizens with healthcare services.



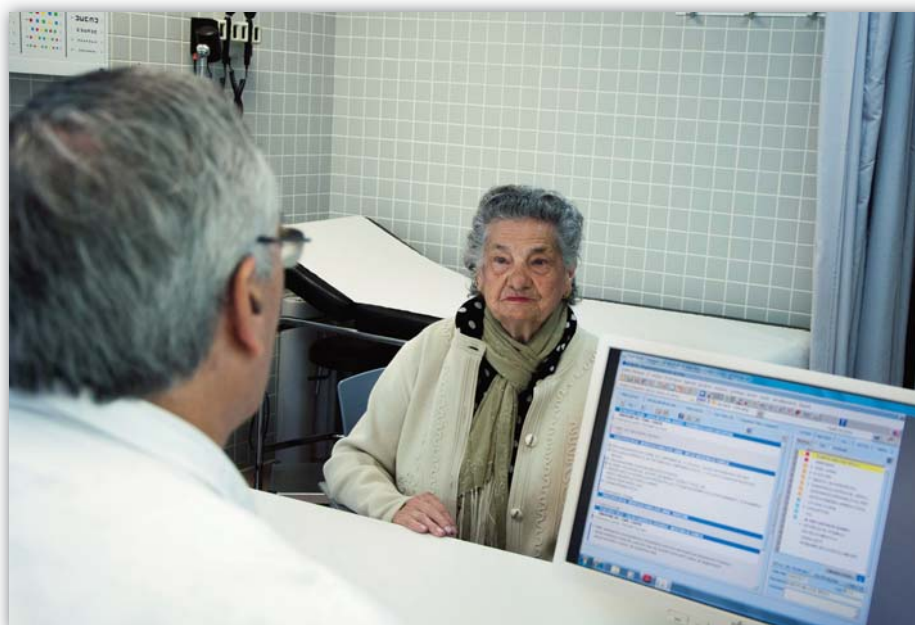
The ICS conducts some 4,000 assessments per year for early detection of Alzheimer's and other dementias in primary healthcare thus expediting treatment

Professional staff from the primary healthcare network and the hospitals are working together to detect as soon as possible early-stage neurodegenerative diseases. They do this through the Computerised System for the Support of Dementia Diagnosis in Primary Healthcare (SISDDAP), which gives support to staff when they suspect that a user is developing a cognitive disorder, such as, for example, Alzheimer's disease. Thanks to the use of this screening programme, integrated into the primary healthcare clinical workstation (ECAP), it is possible to start treatment immediately and give guidelines to the patient and family members on ways of slowing the disease's progress.

The information collected is sent to the specialised unit, which is in charge of establishing the most appropriate diagnostic strategy and which, subsequently, sends it back to the primary healthcare professionals. Consequently, the collaboration between primary healthcare professionals and speciality healthcare turns out to be key for providing a rapid and adequate response to the symptoms that patients present and their subsequent monitoring.

The benefits of this tool are numerous: reduction in diagnosis time and start of early treatment in eligible cases; reduction in anxiety for the user, for family members and staff themselves when having to provide care and respond to a demand with a great emotional impact; increase in training in degenerative diseases and standardisation of the psycho-geriatric assessment in primary healthcare; collaborative work with specialised units and the improvement of relations and the exchanging of information.

This project was launched in the year 2006 in Girona, based on collaboration between the territory's primary healthcare teams and the Santa Caterina Hospital in Salt. In 2014, the SISDDAP recorded 2,500 assessments in Girona, a figure that represents an increase of 67% with respect to the previous year. In the Metropolitana Nord the project has been functioning for the last two years in the primary healthcare teams of the Vallès Oriental and at the hospitals of Mollet, Granollers and Sant Celoni. Each year approximately 1,500 assessments have been carried out, which has enabled a considerable reduction in waiting times for an appointment with the specialist.



The computerised support system for diagnosis of dementias in primary healthcare has given good results in Girona and in the Metropolitana Nord area. In 2015 it is also planned to launch the system in Lleida.

Collaboration between primary healthcare and specialised care is key to providing a fast and adequate response to patient symptoms and their monitoring.

The ICS's ASSIRs offer voluntary pharmacological termination of pregnancy up to 9 weeks of gestation

During the year 2014, the ICS's services for the care of sexual and reproductive health expanded their range of services with the offering of voluntary pharmacological termination of pregnancy (VTP) up to nine weeks of gestation.

From the start of this project in the year 2011, up to 2014, the ICS ASSIRs have carried out a total of 14,901 pharmacological VTPs at the 13 primary healthcare centres authorised to carry out this procedure. In these years, the percentage of pharmacological VTPs with respect to the total VTPs practised in Catalonia increased from 5.5% in 2011 to 28.9% in 2014, while surgical VTPs fell from 94.5% in 2011 to 76.6% in 2014.

Pharmacological VTPs increase the degree of satisfaction and the involvement of women in this process, while simultaneously reducing the complexity and cost of this service.

ICS staff can now effect therapeutic consultations through their clinical workstation

Since the month of January, ICS doctors have been able to direct consultations relating to the treatment of their patients via telematic means to the Catalan Pharmacology Institute Foundation (FICF) thanks to an agreement signed by the two organisations. Consultations are managed through a messaging system incorporated into the community prescription module, which is accessible from different clinical workstations. This service is added to the already-existing possibility of submitting consultations to the ICS's pharmacists and pharmacologists in the territory.

In recent years, new and highly effective drugs have appeared, but they may give rise to side effects, especially in elderly people or those with several illnesses. These side effects are not always sufficiently known by healthcare professionals. In addition, the number of chronically ill patients who take various medications at the same time has increased, which may cause unexpected interactions. The possibility of consulting with experts the effects of the medications allows practitioners to improve the effectiveness of the pharmacological treatments of patients seen in primary and specialised healthcare, avoiding undesirable effects and resolving queries about a specific medication.

The therapeutic consultation gives practitioners a support service, through teamwork with the therapeutic specialists, when it comes to making patient-focused clinical decisions to be able to provide better patient care, especially in attention to chronic conditions.

The system guarantees the confidentiality of data at all times and also allows the response to be included in the patient's case history; therefore the verdicts received by the medical practitioner have a guarantee of safety.

The community prescription module developed by the ICS is accessible from the ECAP and from the Argos hospital clinical workstation, as well as other platforms developed by other healthcare providers.

Consultation by videoconference is extended to more services for sexual and reproductive healthcare

A total of 12 ICS sexual and reproductive healthcare services (ASSIRs) offer their users the possibility of consultations via videoconference. This telematic service, which coexists with check-up appointments and monitoring at the healthcare service, allows women to talk with midwives without the need to travel to the centre.

The initiative was launched in the year 2009 as a pilot test at various ASSIRs all around Catalonia and since 2012 it has gradually been extended across the entire territory. The first to incorporate these telematic consultations into their portfolio of services were the ASSIRs of Barcelona Ciutat, Vallès Oriental and Vallès Occidental. In the year 2013 they were followed by those of Vilanova-Garraf, Girona and Lleida. During the year 2014, the system was implemented in Alt Pirineu, Anoia and Cornellà.

In the year 2014, approximately half of the consultations made by videoconference referred to questions related to post-natal matters, 21% to pregnancy and 36.5% were consultations about contraception methods. Over 60% of the service's users were aged between 25 and 35 years and 38% were new first-time mothers.

The primary healthcare Committee for Territorial References in Sexually-Transmitted Diseases is created

One of the main objectives of the Committee is to give impetus to and consolidate the implementation of the Catalan Ministry of Health's Plan for STD Prevention and Care in Catalonia to all territories and all primary healthcare services and teams managed by the ICS.

Its most notable competencies are: participating in an operative way in the deployment of the STDs Plan in the corresponding territories; contributing criteria and advice as well as proposing actions in this sense; identifying problems and opportunities for the promotion of the territorial plans, and establishing mechanisms for the exchange of experiences and knowledge.

Vall d'Hebron performs pre-natal operations on foetuses with spina bifida using a new endoscopic technique that reduces prematurity and effects of the disorder

For the last three years, paediatric and obstetric surgeons who are members of the Vall d'Hebron's Foetal Surgery Programme, in collaboration with the Spina Bifida Unit, have been successfully operating on foetuses diagnosed with myelomeningocele or spina bifida, a congenital disorder that affects the central nervous system and causes paralysis of the lower limbs with difficulty or incapacity in walking, as well as incontinence of sphincters due to the progressive lesion of the neural tissue exposed to the amniotic fluid during gestation. The standard treatment for these interventions, of extremely high complexity, is open foetal surgery. This means opening the mother's womb mid-term during the pregnancy, as if practising a caesarean section, and exposing the foetus's back in order to operate and proceed to surgically correct the defect. Then, the womb has to be closed once more.

For the last year, a multidisciplinary team from the Hospital with specialists in foetal surgery, obstetrics, neurosurgery, orthopaedics, anaesthesia, radiology, physical therapy, urology, nursing etc., has been performing these interventions via foetoscopy, a minimally invasive technique

Spina bifida is the second cause of disability in childhood.



Record in lung transplants in Catalonia

During the months of May and June, 24 lung transplants were performed in Catalonia (12 each month), a record figure that evidences that the Catalan Lung Transplant Programme, which is performed at Vall d'Hebron, is one of the best in the world.

Vall d'Hebron University Hospital is the only centre in Catalonia that carries out lung transplants and the hospital that practices most interventions of this type in the whole of Spain. In the year 2014, a total of 67 transplants were carried out here (one in every four of those conducted), an activity figure only comparable with the leading centres worldwide.

Lung transplants have long been considered as a treatment option for chronic respiratory insufficiency in the majority of developed countries. Currently one in every two patients remains alive five years after the intervention and one in every four remains alive after ten years.

(non-open surgery) that consists in accessing the mother's uterus through two small incisions (without the need to open it) in order to reach the lumbar region of the foetus and correct the malformation. Once the spinal cord is exposed at the site where the foetus has the defect, it is protected with biocompatible patches that substitute the layers of tissue that are missing. Afterwards the area with the defect is closed using a sealant bioadhesive patch that protects the spinal cord from contact with the amniotic fluid. As the foetus grows, skin gradually substitutes the adhesive and covers the patch. When the baby is born, the defect that has been protected can be closed and re-covered by the skin. This innovative technique to seal the defect in the foetus was conceived and developed by the **Paediatric Bioengineering, Orthopaedics and Surgery Group of the Vall d'Hebron Research Institute (VHIR)** after years of experimenting with the surgery on animal models.

The combination of these two pioneering techniques – intervening through foetoscopy on the foetus and protecting the spinal cord by placing a special patch that will allow the defect to be closed and make use of the benefits of foetal cicatrisation – has given good results in the nine cases where it has been performed to date, as six of the babies have been born at term (reduction in prematurity) and the complications for the mother as well as the effects on the foetus were reduced. With this prenatal intervention the subsequent deterioration of the nerves and their function is avoided, to achieve an improvement in walking and also, apparently, to improve the Chiari II malformation, hydrocephalus and, therefore, the risk of mental deterioration.

A woman affected by a serious congenital cardiopathy manages to become a mother thanks to a pioneering intervention carried out while she was pregnant

A multidisciplinary team at Vall d'Hebron operated on a 22-week pregnant woman who underwent a prosthetic aortic valve substitution after admission because her prosthesis had failed due to the overload caused by the pregnancy, leading to heart failure and severe stenosis which endangered her life and that of the foetus.

Faced with the deterioration in the heart function of the patient, who suffered from a severe congenital cardiopathy that was manifest from birth, and given the risk that a surgical intervention represented for both mother and foetus (30% of possibilities of losing the baby), the medical team opted to practice an innovative technique, known as *valve in valve*, which consisted of implanting an aortic prosthesis (TAVI) inside the prosthesis that she already had implanted and that was causing severe problems, with the aim of repairing it.

This prosthesis was implanted using minimally invasive techniques, through the introduction of a catheter through one of the femoral arteries, until the malfunctioning prosthesis was reached. Then, using a balloon, a new prosthetic valve was placed in an ideal position during very fast stimulation of the heart, under radiological and echocardiographic control and with a general anaesthetic.

Thanks to this intervention, the woman continued with her pregnancy with normality, although she had to undergo strict medical check-ups. The baby was born in late January, after 37 weeks of gestation.

The success of this intervention was made possible thanks to the coordinated work of all the Hospital's professionals who intervened in the monitoring of the patient. This is the first time that this procedure has been carried out on a pregnant woman anywhere in the world.

The start-up of the CAP Casernes reinforces primary healthcare in Sant Andreu in Barcelona

The CAP Casernes, situated inside the Isabel Roig – Casernes de Sant Andreu Healthcare Centre in Barcelona, began its activity in the month of June 2014. A team formed by family and community medicine, nursing, dentistry and social work and community care professionals provides comprehensive health services, with preventive and healthcare education activities, monitoring of chronically ill patients and home care programmes.



The opening of the new CAP Casernes has permitted the reorganisation of primary healthcare in Sant Andreu and the implementation of a new primary healthcare model that has a higher case resolution rate and is distributed between the neighbourhood's two primary healthcare centres.

The CAP Casernes offers primary healthcare for adults, dentistry for adults and children and care for those with chronic conditions. Moreover, at the Casernes Comprehensive Paediatric Healthcare Centre (CAPI), the entire paediatric population of the Sant Andreu neighbourhood is attended to by a territorial paediatrics team with higher case resolution that has been progressively reinforced with the transfer of paediatrics specialists from Vall d'Hebron, who also attend to the children in the hospital's catchment area whose conditions do not require high-technology equipment.

The CAP Sant Andreu retains primary healthcare for adults for its assigned population and in addition maintains the sexual and reproductive healthcare services, physiotherapy and diagnostic imaging for the entire district, as well as specialities for adults from the Vall d'Hebron Hospital.

Germans Trias opens a new operating theatre for heart surgery and a specific unit for post-operative patient care

A new, highly specialised operating theatre and a new unit in semi-critical care: these are the two actions that Germans Trias Hospital has launched this year to be able to continue offering, with optimum waiting times, excellent care for patients who undergo heart surgery. And the fact is that, since 2014, this hospital in Badalona has been the referral centre for heart surgery for the comarcal regions of Girona too,

Children are attended to by a high-resolution territorial paediatrics team that includes specialists from Vall d' Hebron.

400,000 residents of Badalona, Santa Coloma de Gramenet, Sant Adrià, Montgat, Tiana, Teià, Alella and El Masnou will have access to a portfolio of common services.

which means it has operated on a hundred people more than in the previous year. In total, some 600 interventions were performed.

The new Acute Cardiology Patients Unit consists of eight beds on the hospitalisation floor and it is an intermediate area between intensive care and normal wards which has a physician on duty 24 hours a day. This makes it possible for patients to spend less time in the intensive care unit and speeds up the heart operations circuit without reducing care quality. Both the unit and the operating theatre are two improvements that consolidate the activity of excellence of Germans Trias in this area.

The ICS leads in Metropolitana Nord a territorial allergies unit that is a pioneer unit in Catalonia

Specialists in allergies at Germans Trias Hospital, the Municipal Hospital of Badalona (Badalona Serveis Assistencials) and the L'Esperit Sant Hospital, along with specialists in family and community medicine in primary healthcare from both the ICS and of Badalona Serveis Assistencials, joined efforts at the end of 2014 to create a unique territorial service organised according to the complexity of allergic conditions. In the case of the L'Esperit Sant Hospital, the hospital offering is complemented with a specific partnership with the Fundació Sant Pere Claver for the population of Santa Coloma de Gramenet.

The result is that more than 400,000 citizens living in Badalona, Santa Coloma de Gramenet, Sant Adrià de Besòs, Montgat, Tiana, Teià, Alella and El Masnou are attended to in line with a charter of services and a system of common referrals. To date this coordinated organisation did not exist. Henceforth it will enable patients to be visited by the most appropriate practitioner according to the characteristics of their condition and with an increasingly short waiting time. This is a pioneering collaboration initiative in Catalonia that classifies the allergies into three levels of complexity and based on this classification determines which is the best care that can be offered to each patient.

The extension of Viladecans Hospital will enable an increase in its case resolution capacity

With the aim of Viladecans Hospital being able to respond to the care needs of over 180,000 residents in the localities of Viladecans, Gavà, Castelldefels, Begues and Sant Climent de Llobregat and of equipping it with quality, accessible and safe services that are well-coordinated with primary healthcare, social care, mental healthcare and hospital care, during the year 2014 the Functional Plan for the extension of the Hospital was drawn up. This plan defines the charter of services for the centre and the dimensions of the structures necessary to be able to develop the healthcare activity envisaged.

The expansion will represent an increase of 90% of the built surface that will grow from 13,500 to 25,700 m², enabling the number of beds for hospitalisation to reach 152 and allowing it access to a minimum of 20% of individual rooms with the remainder being doubles. This action will constitute a considerable improvement in the current structure of the Hospital, which still has a significant number of rooms with four beds.

Other notable improvements will be concentrated in the surgical area which, according to the new functional plan, will change from five oper-

ating theatres divided across two blocks to a single block of seven operating theatres, with one of these assigned to emergencies. In addition, in the surgery area, a section for minor outpatient surgery will also be fitted.

The emergencies area will be expanded from 24 to 38 bays with six additional bays for critical patient care. The outpatient consultations area will be increased by 54%, taking the current 43 consulting and examination rooms up to 66.



The Functional Plan also promotes outpatient activity and alternatives to conventional hospitalisation such as, for example, home hospitalisation and the day hospital, which will increase its eight places to 21, and will also have four places for cancer patients.

The ultimate objective is to enable a flexible hospital model, with capacity for adaptation and expansion in the future, and with a patient-oriented approach.

Improvements in the programming of outpatient consultations and the Emergencies service are implemented at Arnau de Vilanova Hospital

In order to improve access to specialists and encourage coordination between all the healthcare services in the territory, those patients attended to in the emergencies department that require subsequent monitoring by a specialist leave the centre with their appointment programmed, thus avoiding the need to visit their GP to request the appointment.

With this circuit, the physician in Emergencies who has attended to the patient directly issues the appointment request. In the Programming Unit, the appointment is scheduled according to the pathology or care need of the patient and the day and time for the appointment with the corresponding specialist is established, whether at Arnau de Vilanova, at Santa Maria Hospital, or at one of the three primary healthcare centres that offer specialised care: CAP Tàrrrega, CAP Balaguer and CAP Mollerussa. This new circuit, which was set up at the end of 2013 in the Traumatology Service, has gradually been implemented during 2014 in the Surgery, Vascular Surgery, Ear, Nose & Throat, Ophthalmology, Urology and Digestive services.

In this same direction, the programming service has begun a new programming system where users of outpatient consultations at Arnau de

The Alt Penedès Paediatrics team has a new Paediatric Gastroenterology Unit

In May the new Paediatric Gastroenterology Unit for the Alt Penedès Territory was constituted, in collaboration with the Sant Joan de Déu Hospital in Barcelona. At the unit, which is located at the CAP Alt Penedès, the digestive, hepatic and nutritional problems are treated in children, as these are usually very different to those presenting in adults, and complementary examinations are adapted to each age group.

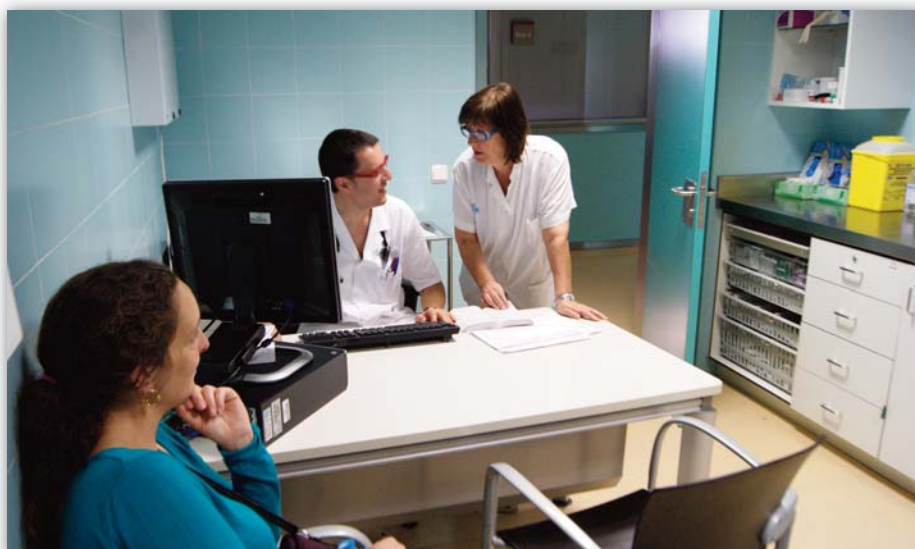
The CUAP Lleida moves to the CAP Prat de la Riba and implements a patient triage system

The Lleida primary healthcare emergency centre (CUAP) has transferred its care activity to the CAP Prat de la Riba. With this move, the CUAP Lleida has more space and better distribution of the consulting rooms that are all situated on the same floor. In addition, it has been equipped with two consulting rooms for triage, a recovery consulting room, two observation bays with five beds, three paediatric consulting rooms, five medicine consulting rooms, two multi-purpose consulting rooms for nursing staff and a meeting room.

The new CUAP also has a radiology service. Coinciding with this move, the CUAP has implemented the Andorran Triage Model (MAT), a system that allows a preliminary clinical assessment of patients to be carried out, classifying them into five levels according to their degree of severity, independently of their order of arrival.

Vilanova do not have to stop at the desk to schedule follow-up appointments, as these are programmed and communicated by telephone. This "delayed programming" enables the Programming Unit to manage the outpatient consultations agendas and the programming of successive appointments. Once the appointment proposal exists, a call is made to the user to tell them the day and time for the follow-up appointment.

With this new programming model it is aimed to facilitate accessibility to the Hospital, to improve care for patients and to ensure that the programming of outpatient consultations is more accurate and efficient. This programming proposal has been implemented in the services of Urology, Ear, Nose & Throat, Rheumatology, Traumatology, Endocrinology, Internal Medicine, Neurosurgery, Nephrology, Maxillofacial Surgery and Ophthalmology.



All CAPs in the Pyrenees now have ultrasound scanners

In the year 2014, all primary healthcare centres in the Pyrenees have been equipped with new ultrasound scanners, with the aim of improving their diagnostic capacity for low-complexity processes. The incorporation of ultrasound scanners into the primary healthcare network responds to the targets set by the Catalonia Health Plan 2011-2015, since it affords this healthcare level greater capacity for case resolution. It also means an increase in satisfaction for users, who avoid unnecessary travel and have greater access to diagnostic tests, especially in remote or mountainous areas.

Primary Healthcare in Girona promotes the Nen@s en moviment Programme for tackling childhood obesity

The ICS primary healthcare teams in Girona, through alliances with organisations in the territory, have developed different actions to provide healthcare information and education to encourage the adopting of healthy lifestyles and incentivise quitting smoking among the population.

One of the most significant intervention projects in 2014 has been the Nen@s en moviment (Children in Motion) Programme, aimed at helping primary school pupils who are overweight or obese. The programme ad-

dresses the everyday life of the child to facilitate the choice of healthier options within their natural environment and its fundamental pillars are nutrition, physical exercise and emotions. The EAPs of Cassà de la Selva and Figueres have been the first to launch this project in collaboration with DipSalut, the town councils and the schools of these municipalities. The programme, which involves parents, teachers, free-time monitors and healthcare professionals, proposes measures to normalise children's body mass index and increase their self-esteem.

In addition, the primary healthcare teams in Besalú, Bàscara, Sant Feliu de Guíxols, Tordera, Pineda de Mar and Blanes have set up psycho-educational groups for fibromyalgia and chronic fatigue led by doctors, nurses and physiotherapists.

Joan XXIII Hospital performs gallbladder operations as outpatient surgery using 3D laparoscopy

The General Surgery Service of Joan XXIII University Hospital in Tarragona, with the collaboration of other services such as Anaesthesia, Operating Theatre Nursing and Home Hospitalisation, have incorporated three-dimensional (3D) laparoscopy into its procedures for cholecystectomy, the removal of gallbladders with gallstones, a disorder that affects a large number of patients.

Laparoscopy or minimally invasive surgery allows the cholecystectomy to be carried out via small incisions in the skin through which a miniature camera is inserted. The surgeon uses this camera to observe the organ and perform the intervention while watching a television screen. With the 3D technique and using special spectacles, the 3D view is incorporated in order to offer greater precision to the surgeon, improve the patient's safety and reduce the duration of the intervention.

Moreover, this technical development of laparoscopic surgery, together with the expertise of the surgeons and new anaesthesia methods that facilitate earlier recovery of the patient, have contributed towards the development of cholecystectomy as a non-admission surgery programme, in which the same intervention is carried out without the need for the patient to be admitted to the centre, with good results and low complication rates. This technique implemented by Joan XXIII Hospital to operate on cholelithiasis is new in the comarcal regions of Tarragona.



Josep Trueta Hospital sets up a special unit for patients requiring high-level intensive care

The new Multi-purpose High-Level Intensive Care Unit (UPIC) started functioning in the month of October and involved the reorganisation of beds throughout the Hospital to differentiate patient care according to the level of care required.

This new space is staffed by medical professionals from different services and nursing staff with experience especially in high-intensity and high-complexity care. The aim is to improve patient care and increase the capacity for hospital case resolution of acute complex patients with high dependency on nursing care. This allows for coordinated attention focusing on the care needs of acute complex patients with severe illness, who may be admitted to the Hospital following referral from medical care, or who come from the operating theatre or post-operative recovery unit.

The UPIC has a total of 25 beds, of which eight have continuous monitoring. There are six beds in the stroke and neurological patient area and the rest are allocated to patients requiring a high level of care.

The Surgery, Urology, and Ear, Nose & Throat services of the Hospital give support to the project and participate in its coordination together with primary healthcare teams.

Patients in Terres de l'Ebre receive care from expert nurses with the tele-ostomy project led by Verge de la Cinta Hospital

The territorial tele-ostomy project, which has been up and running since 1 October 2014, is structured with the setting up of a face-to-face and virtual consultation for ostomies provided by three expert nursing staff members from Verge de la Cinta Hospital in Tortosa. It receives support from the Surgery, Urology and Ear, Nose & Throat services, which participate in its coordination together with primary healthcare teams.

In the face-to-face consulting room especially assigned to ostomy patients, the expert nurse effects the pre-operative appointment for healthcare education and the post-operative appointment following discharge, as well as any check-ups or visits necessary that are referred by practitioners at primary healthcare centres. These are appointments that CAP nurses or doctors can make telematically by programming a virtual appointment and subsequently sending an assessment of the patient and the stoma and attaching a photograph. The referral nurse views the photograph and, with all the data at his or her disposal, proposes a treatment.

Ostomy is a surgery that is performed to create a new opening, called a stoma, as a treatment for some diseases that require removal of either the small intestine (ileostomy), a part of the colon and rectum (colostomy), the urinary bladder (urostomy) or the larynx (tracheostomy).

In the last four years there have been 235 patients with ostomies operated on at Verge de la Cinta Hospital. Of these, 113 had a colostomy, 84 an ileostomy, 22 a urostomy and 16 a tracheostomy. In addition there are also patients operated on at other hospitals but who reside in Terres de l'Ebre and who, therefore, are also users of its territorial healthcare system.

The ICS in Catalunya Central improves case resolution in locomotive system disorders

Improvement in case resolution in locomotive system disorders has been one of the most prominent actions of the ICS in Catalunya Central. In both the Anoia and Bages regions, projects have been launched to increase the case resolution capacity of primary healthcare in low-complexity consultations, and at the same time, to improve access to specialised care, speed up diagnosis, order interventions and structure collaboration between the two care levels.

In the Bages area, virtual inter-consulting between medical staff has been encouraged, with a resolution percentage of 42% and the consequent reduction in programmed face-to-face appointments. Complementary imaging examinations have also been agreed such as magnetic nuclear resonance imaging in specialised care services when this is the diagnostic test proposed as a result of inter-consultation. This means that the case may be resolved without referral, or alternatively, if surgery is indicated, the first appointment is already directed at surgical preparation and planning. Finally, the figure of a specific consulting traumatologist has been introduced for each primary healthcare team, for training and consultations both on a face-to-face basis at the CAP and through telematic means.

In the case of Anoia, the option taken was a direct presence support model, in which the specialist in orthopaedic and trauma surgery at Igualada Hospital is present one day a week at the CAP with three lines



of action: continuing training of the team's professionals; face-to-face consulting of cases, with decisions on treatment, monitoring and/or referral and, finally, direct appointments for patients together with their family doctor, whenever possible. In the latter activity, case resolution is combined with on-the-job training for primary healthcare professionals, empowering them with the aim of improving the competence and case resolution capacity of primary healthcare.

The CAPSE sets up a clinical decision help system for requesting radiological testing

The American College of Radiology has developed evidence-based guidelines to optimise the use of radiology in clinical practice and has created an application for help in clinical decisions (ACR Select Appropriateness Criteria®) which aids in selecting the most suitable radiological test when faced with a specific clinical picture.

The Primary Healthcare Consortium of the Eixample (CAPSE) has adapted this application to the digitalised medical history to improve the quality of care for patients and contribute to more efficient use of radiological imaging tests. With this objective, it has created a multidisciplinary work group made up of family physicians and radiology specialists from the Hospital Clínic in order to translate and adapt ACR Select to primary healthcare according to the recommendations of the European radiology guides. It has integrated the application into the regular radiology application, so that when requesting a test, the most appropriate option for this clinical situation is suggested.

This innovative project aims to improve the accuracy of requests for radiological testing and reduce variability, with the consequent increase in efficacy and case resolution. It also improves patient safety as it reduces the number of radiological tests necessary, thus reducing the global radiation load accumulated by each patient.

The Castelldefels Health Agents Consortium improves its paediatric care

The EAP Can Bou, which has 5,410 children aged 0 to 14 years assigned to it, has restructured the Paediatric Service in order to redistribute care loads and the competencies of each medical professional. Thus, in addition to improving nurses' knowledge and skills regarding child development and the detecting of warning signs, it has also established the figure of the nurse as the entrance point to the system and a reference point for health, and has increased the degree of autonomy of parents with respect to making decisions in aspects related with the health of their children.

The reorganisation of the service has been carried out with a methodology based on work groups formed by medical professionals from all levels of the organisation (nurses, paediatricians, administrative staff and managers). The functions of each professional have been defined according to their competencies. This has allowed a higher profile to be played by nurses in all health prevention and promotion activities, as well as in the initial approach to acute health problems at hours of peak affluence to the centre, achieving greater accessibility and case resolution. Thus, the paediatrician adopts the role of consultant when the nurse requests this and so can dedicate more time to resolving health problems.



Nurses assume a key role in health prevention and promotion activities and in the initial approach to acute health problems.

Primary healthcare teams (EAPs) with the best Healthcare Quality Standard (EQA) scores

EAP	EQA points Adults
EAP Montornès - Montmeló	938
EAP Ca n'Oriac I Sabadell	931
EAP Martí i Julià I Cornellà de Llobregat	902
EAP Riu Nord - Riu Sud I Santa Coloma de Gramenet	898
EAP Camps Blancs I Sant Boi de Llobregat	889
EAP El Clot	887
EAP Parets del Vallès	883
EAP Dr. Bartomeu Fabrés Anglada I Gavà	882
EAP St. Feliu de Guíxols	882
EAP Bellvitge I L'Hospitalet de Llobregat	872

EAP	EQA points Paediatrics
Alt Penedès Regional Paediatric Care Team	952
EAP Singuerlín I Santa Coloma de Gramenet	948
EAP Vilassar de Dalt	937
EAP Alcarràs	936
EAP Salt	936
EAP Ramona Via I El Prat de Llobregat	931
EAP Vall del Tenes	930
EAP Chafarinas	927
EAP Seròs	925
EAP Can Gibert del Pla I Girona	921

Source: SISAP.

► Quality and patient safety

The ICS centres deploy strategies to improve patient safety

Within the framework of the Plan for Patient Safety in Catalonia defined by the Catalan Ministry of Health, the ICS centres have continued deploying strategies for the prevention of risks and the detection of incidents related with patient safety.

In the different patient care lines, objectives have been included related with the promotion of patient safety and the improvement of quality: hospitals, primary care teams and sexual and reproductive healthcare units, among others.

The primary healthcare network of the ICS has continued to roll out the patient safety functional units (UFSP) initiated during the year 2013 in primary healthcare teams. Thus, all hospitals and primary healthcare teams of the ICS now have UFSPs, the aim being to promote a patient safety culture and develop strategies to improve clinical safety. In this area, it is important to highlight the project for the Development of Patient Safety Functional Units in the primary healthcare teams (EAPs) of Terres de l'Ebre, which was one of five to receive an award out of over 900 experiences throughout Catalonia that were presented at the Health Plan Conference in 2014.

During the year 2014, all EAPs had the TPSC Cloud tool for the notification of adverse events installed in order to report events or circumstances that have caused or may cause unnecessary harm to patients, such as errors in medication, communication, the diagnostic process, etc. The hospitals use the same notification system.

Other strategies related with patient safety in primary healthcare at the ICS include the development of a computerised application for the prevention of risks relating to patient safety at the EAPs of Camp de Tarragona, which allows preventive activities to be defined and planned and the effective management of patient safety incidents.

The accreditation procedure for primary healthcare teams begins

During the year 2014, the accreditation procedure began for the ICS primary healthcare teams according to Decree 86/2014, of 10 June, which establishes the system for the accreditation of primary healthcare teams in Catalonia. The standards used to establish quality levels are inspired by different recognised accreditation models and the management model of the European Quality Management Foundation (EQMF) and have been agreed with different agents from the sector.

A total of 17 ICS primary healthcare teams, nine from Camp de Tarragona and eight from Metropolitana Nord, were the first to begin the accreditation process according to the Catalan Ministry of Health's EAP accreditation model. The rest of the organisation's EAPs will begin the process during the period 2015-2016. The preliminary results of the external validation have been very positive. The inclusion of quality- and patient safety-related objectives in the ICS management agreements have been a key tool in enabling teams to tackle this process.

Three ICS experiences win prizes at the 4th Health Plan Conference

Three experiences run at ICS centres received prizes at the 4th Health Plan Conference which was held in Sils. The three projects are geared towards improving people's health and are framed within the lines included in the Catalonia Health Plan 2011-2015. A total of 900 experiences were presented and five of them received prizes.

One of the prizes was a project run by the Terres de l'Ebre Primary Healthcare Service, consisting of the setting up of a **strategy for managing patient safety** in 11 primary healthcare teams in Terres de l'Ebre.

Another prize was awarded to the **Reorganisation of the Heart Surgery Programme** at Bellvitge University Hospital, which managed to reduce the number of patients on the waiting list and their waiting times while maintaining quality standards. These improvements have been obtained through the reviewing of circuits and the optimisation of waiting lists. Since it began, the programme has led to a reduction in mortality rates from 0.9% to 0.8%, in the stay in the ICU from 5.7 to 5.3 days and in readmissions from 4.2% to 2.3% of the total discharges.

The third prize was for the **GeriàtrICS** project, aimed at improving care for elderly patients institutionalised at different old people's homes in Metropolitana Nord through the introduction of a balanced scorecard that allows the monitoring and comparison of different clinical, management and pharmacological indicators. The goal of the project is to improve care continuity, achieve greater speed in attention to relapses, improve treatment capacity for decompensations and develop skills in nursing and care for chronic patients.

The Spanish Ministry of Health recognises five ICS initiatives in sexual, reproductive and mother & child healthcare as good practices

A total of five initiatives promoted by ICS professionals have received public recognition from the Spanish Ministry of Health, Social Services and Equality, for their capacity for giving a better service to citizens within their speciality. The five experiences are the following:

- **Programme for low-risk postnatal discharges being undertaken by midwives** (Vall d'Hebron University Hospital). The programme, in which all the professionals of the Mother & Child Area are involved, has allowed the training of midwives so that they can discharge women who have given birth and present a low level of risk, always with the supervision of a physician. At the same time, they educate mothers in breastfeeding, postnatal care and warning signs to bear in mind with babies. In all cases, continuity of healthcare is guaranteed through the primary healthcare centres in the area.
- **Water birth, an improvement in childbirth care** (Verge de la Cinta Hospital in Tortosa). The implementation of water births has been progressive since the year 2007 with the aims of offering a different alternative in birthing care, satisfying the demand from women who want to give birth in water, and comparing the differences in the types of birth and perineal trauma among women who use hydrotherapy and those who do not.

32 ICS primary healthcare teams from the metropolitan area of Barcelona obtain excellent results in Benchmarking

A total of 32 ICS primary healthcare teams obtained excellent results in the Benchmarking report on the EAPs of the Barcelona Healthcare Region. The study evaluates the results corresponding to the year 2013 of teams in the region, with the aim of identifying aspects for improvement based on comparison with other centres. Of the 216 teams analysed (from Barcelona Ciutat and its metropolitan area), the report highlights 37 as model teams.

The variables analysed correspond to accessibility, effectiveness, case resolution capacity and cost efficiency. With these data, a global image is obtained of the daily work of the staff and their commitment and dedication to the patients that use the centres.

From the ICS teams selected in the report, 20 correspond to Metropolitana Nord, eight to Metropolitana Sud and four to Barcelona Ciutat. In first place was the EAP Montornès-Montmeló, second place was occupied by the EAP Vilassar de Dalt and fourth place by the EAP Vall del Tenes. These three teams obtained a global score above eight out of ten.

Vall d'Hebron wins three Best in Class prizes

Vall d'Hebron was awarded this year with three **Best in Class prizes**, awarded by the *Gaceta Médica* newspaper and the Chair for Healthcare Innovation and Management at the Rey Juan Carlos University.

The prizes were won by the Hematopoietic Progenitor Cell Transplant Unit, the Multiple Sclerosis Centre (**Cemcat**) and the **VHIR**, the latter as the best centre in the research and innovation section.



- **Let's change it: joint responsibility and responsible fatherhood. Group intervention with future fathers in Barcelona** (Sexual and Reproductive Healthcare of the CAP Sant Andreu). The project provides resources and resolves the most frequent queries from men about to become fathers. The group offers a space to reflect on and share experiences that help them to enjoy a better fatherhood experience and become involved in caring tasks together with their partners.
- **Implementation of care via video-conferencing during pregnancy and the post-natal period** (ASSIRs of Barcelona, Sabadell, Cerdanyola, Garraf, Girona and Lleida). This kind of consultation offers visual contact between women and their midwives via the Internet through the free program Skype, which enables video calls to be held in real time.
- **Virtual consultation for young people** (Sexe Joves website). This Canal Salut (Health Channel) website offers information on relations and sexual health aimed at young people aged 14 to 25 years and produced by professionals in sexual and reproductive healthcare.

Vall d'Hebron receives CSUR accreditation as a referral centre for children's heart transplants

The Inter-territorial Council of the National Health System has recognised Vall d'Hebron University Hospital as a referral centre for the whole of Spain in children's heart transplants. The Hospital had already been recognised with this accreditation for 19 groups of pathologies.

The Vall d'Hebron Heart Transplant Programme began in the year 2006 with a heart-lungs transplant, the first ever performed in Spain on a patient of paediatric age. Two years later, in 2008, the first heart transplant was carried out and since then 22 transplants have been carried out with a survival rate of 84.2% three years following the intervention.

In this sphere, Vall d'Hebron is working to set up transplants in non-compatible blood groups that will allow an increase in the number of donors for children aged under three years.

With this accreditation, Vall d'Hebron now has 20 CSUR accreditations from the Spanish Ministry of Health, Social Services and Equality for the care of specific conditions and the undertaking of procedures indicated for them. Moreover, it is important to point out that Bellvitge Hospital also has nine CSUR accreditations.

The Trueta Breast Unit receives Spain's highest recognition in the sector

The Breast Unit (UPM) at Dr. Josep Trueta University Hospital in Girona **has received accreditation** from the Spanish Society of Senology and Breast Disorders (SESPM), a distinction that was not previously held by any healthcare centre in the Girona region and that certifies a high level of excellence and care quality.

The Trueta UPM undertakes care and research activity which encompasses professionals from all those specialities involved in the treatment of breast disorders that make up the unit: general surgery and plastic and repair surgery, gynaecology, radiology, anatomical pathology, medical oncology and radiotherapy, as well as other specialist medical staff in nuclear medicine, specialised nursing and physiotherapy. The main objective

of the UPM is to offer comprehensive assistance in the diagnosis of breast disorders and especially breast cancer, the most frequent cancer among women, which in Catalonia affects 111 women out of every 100,000. It is calculated that nine out of every 100 women in Catalonia will suffer from breast cancer at some point in their lifetime.

Germans Trias, Arnau de Vilanova, Joan XXIII and Verge de la Cinta, among the Top 20 Hospitals of 2014

The Germans Trias, Arnau de Vilanova and Joan XXIII and Verge de la Cinta hospitals, all managed by the ICS, each received one of the TOP 20 awards which are presented by healthcare services consultants Iasist every year. This distinction places value on the quality of management and care of the participating centres, grouped into different categories. The prizes were presented during a ceremony held in Madrid. Of the 40 hospitals awarded, 17 are in Catalonia and they received a total of 23 prizes in different categories.

Germans Trias i Pujol Hospital was awarded the Global Hospital Management Award within the category of Major Referral Hospitals. Arnau de Vilanova University Hospital in Lleida and Joan XXIII University Hospital in Tarragona received a distinction for Global Hospital Management in the Hospitals category. Verge de la Cinta Hospital in Tortosa merited a Global Hospital Management Prize in the category of Medium-Sized General Hospitals. Moreover, Germans Trias Hospital also received a further two prizes, one awarded to the Nervous System Area and the other to the Musculoskeletal System.



In addition to the prize-winning centres, Bellvitge University Hospital was nominated for the Global Hospital Management Award within the category of Major Referral Hospitals. Bellvitge was also nominated in the Nervous System Area while Joan XXIII Hospital was nominated in the Respiratory System Area.

In this year's edition, a total of 163 hospitals participated from all around Spain (126 public and 37 private), of which 67 were nominated.

The hospitals receiving prizes from Iasist have a 26% higher productivity than the other centres and show better care quality results, with 21% less mortality and 17% fewer complications.

This distinction places value on the quality of management and care of the participating centres, grouped into different categories.

Germans Trias also won two further awards, one in the Nervous System Area and the other in the Musculoskeletal System Area.

Diario Médico awards prizes to three ICS “Best Ideas”

The publication *Diario Médico*, which specialises in healthcare and medicine, awarded Best Ideas of 2014 prizes to three initiatives in which ICS staff are participating. These were: the telemedicine project, **Telèmac**, to improve the quality of life of chronically ill patients, a **pioneering intervention** carried out at Vall d’Hebron Hospital on a pregnant woman with a congenital heart disease and a **study** by the Vall d’Hebron Research Institute that identified exposure to feather quilts and pillows as one of the main causes of idiopathic pulmonary fibrosis. The awards were presented on 3 November at the Teatre Nacional de Catalunya in Barcelona.

The Avedis Donabedian Foundation awards prizes for the quality of care at Vall d’Hebron and to the CIMS project in Girona

Two ICS projects merited awards from the Avedis Donabedian Foundation. Vall d’Hebron University Hospital obtained the Prize for Excellence in Quality of Hospitals in recognition of the centre’s quality management system and the CIMS project, a strategic alliance between the ICS and the Healthcare Institute (IAS) of Girona, received the Consortium Health and Social Prize of Catalonia for Excellence in Quality in Care Integration. The prizes were presented during the Catalan Healthcare New Year’s Concert, which was held at the Palau de la Música.

The award for **Vall d’Hebron University Hospital** recognises the centre’s quality management system, as it has an extensive track record in both its organisation and its staff culture and is geared towards continuous improvement in quality. Standing out as key elements are its focus on patients, its management’s leadership and its institutional commitment, as well as its staff participation and involvement. During the year 2014, over 1,800 professionals (some 28% of the Hospital’s total) took part in activities for quality assessment and improvement, putting their knowledge at the organisation’s service. It must be highlighted that at the Hospital there are 29 commissions and 34 clinical committees with a permanent structure, as well as different groups for improvement and reference points for quality and safety in units and services.

The prize for the **CIMS project** as the best model of care integration recognises the capacity for implementing a set of actions of coordination and integration which result in an improvement in care quality. The Jury unanimously distinguished the coordination between the different care levels included in the CIMS (primary and hospital care, mental health and addictions, social care and care for people with social dependency), as well as health promotion actions.

The optimisation of the management of medication stocks at Bellvitge recognised with a Profesor Barea Prize 2014

The Bellvitge University Hospital project **Optimisation of the management of medication stocks in hospitalisation units. Preliminary results** received an award in the Management of an Area of Knowledge modality with one of the Profesor Barea Prizes 2014 that are awarded by the Signo Foundation.

This intervention began with a pilot phase of 15 days at two hospitalisation units, immediately expanded to eight units, in which numerous changes in prescription took place and there was a high stock of stored medicines. The intervention consisted of the reduction of stocks at these units and in the implementation of dispensing every two hours, following a *just in time* philosophy that reinforced the prior system of medication dispensing in unitary doses (SDMDU) every 24 hours.

The retrospective cross-disciplinary observational study of this intervention, carried out between 28 May and 31 December 2013, indicated as its main results an average reduction in the stock of medications of 50% and an increase in safety in the management of the medication. The number of units of medications dispensed in orders by the Pharmacy Service fell by 8.5% with relation to the same period of the previous year and the financial sum fell by 8.7%.

► Research

In the year 2014, ICS researchers published more than 3,800 articles in scientific journals, which add up to a total impact factor of 14,381 points

The ICS carries out considerable scientific activity through seven healthcare research institutes that are integrated into the organisation's hospitals and primary healthcare centres: the Bellvitge Biomedical Research Institute (IDIBELL), which manages the research carried out at the hospitals of Bellvitge and Viladecans; the Vall d'Hebron Research Institute (VHIR); the Germans Trias i Pujol Health Sciences Research Institute (IGTP); the Biomedical Research Institute of Lleida (IRBLleida); the Pere Virgili Healthcare Research Institute (IISPV), which manages the research of Joan XXIII Hospital in Tarragona and of Verge de la Cinta Hospital in Tortosa, the Dr. Josep Trueta Biomedical Research Institute of Girona (IDIBGI) and the Jordi Gol Primary Healthcare Research Institute (IDIAP Jordi Gol). Four of these – VHIR, IDIBELL, IGTP and IRBLleida – are accredited by the Carlos III Health Institute as healthcare research institutes.

In total, working at the research centres linked to the ICS, there are nearly 3,500 researchers participating in around a thousand competitive projects. Overall, they manage close to 91 million euros originating from these projects and from clinical trials. In the year 2014, ICS researchers published 3,835 articles in scientific journals that add up to a total impact factor of 14,381.23 points, which makes the ICS the most significant healthcare institute in the whole of Spain in terms of its biomedical research activity.

Scientific production of the research institutes linked to primary healthcare and hospitals

	Articles published in indexed journals with impact factor	Total impact factor	Average impact factor	Current research projects and grants	Clinical trials currently in progress	Applications for patents	R&D Contracts
IDIAP	451	988.426	2.19	234	64	0	20
IDIBELL ¹	949	4,289.80	4.52	390	703	15	12
VHIR	730	4,144.90	5.67	284	886	11	15
IGTP	522	2,431.95	4.66	97	204	6	23
IRBLleida	278	902.00	3.25	42	180	2	7
IISPV ²	210	900	4.29	44	171	3	9
IDIBGI	155	724.15	4.67	57	259	3	8
Total	3,835	14,381.23	3.75	1,148	2,467	40	94

Data supplied by the research institutes in May 2015. Some publications may have been counted by more than one centre.

1. Includes the scientific activity of Viladecans Hospital.
2. Includes the scientific activity of Verge de la Cinta Hospital in Tortosa.



Ferran Morell, Antoni Dávalos and Rafel Ramos, awarded prizes for their Track Record in Research at the ICS.



Heart diseases took the centre stage at the 6th ICS Research Conference

The Catalan Health Institute held its 6th Research Conference at Germans Trias i Pujol University Hospital, which this year focused on cardiovascular disorders.

Heart diseases, which include a set of clinical conditions affecting the heart and the blood vessels (arteries and veins), constitute the leading cause of death and disability in developed countries. This is why research is so important for improving the health of patients and the capacity of Catalan hospitals, especially those of the ICS, to develop research activities of excellence.

A significant number of cases could be avoided by following a healthy diet and lifestyle, therefore the inaugural lecture, like the pre-closing lecture, talked about the role of diet in health and the benefits of the Mediterranean diet in cardiovascular health. The research staff of the centres linked to the ICS talked at two round tables regarding the diagnosis of heart diseases, their treatment and prognosis.

At the end of the Conference, the Prizes were awarded for Track Records in Research at the ICS in Primary Healthcare and Hospitals 2014. The award corresponding to the Primary Healthcare category went to the director of the ICS Research Support Unit in Girona and researcher at the Jordi Gol Institute for Research in Primary Healthcare, Rafel Ramos. In the Hospitals category, the Prize was awarded *ex aequo* to the director of the Neurosciences Area of Germans Trias i Pujol University Hospital and researcher at the Germans Trias i Pujol Health Sciences Research Institute, Antoni Dávalos, and to the head of the Pulmonology Service at Vall d'Hebron University Hospital and researcher at the Vall d'Hebron Research Institute, Ferran Morell.

Primary healthcare physicians carry out research into coronary events

The ARTER Research Group of the IDIAP Jordi Gol has concluded, after a study conducted with 3,307 patients, that patients with peripheral arterial disease present, over 10 years, a risk of dying or presenting cardiovascular events between two and four times higher than patients without peripheral arterial disease.

The ARTER Group proposed to find a tool that permits easy detection from primary healthcare consultations of whether the artery is damaged, even if symptoms are not present. In the study it was shown that measuring the ankle-arm index turned out to be an element for the detection of peripheral arterial disease in asymptomatic patients. This measurement is performed using a pocket Doppler that divides the arterial pressure at the ankle (dorsalis pedis or posterior tibial artery) by the pressure of the control arm (humeral artery). It is an easy and economical way for primary

healthcare centres to detect whether the artery is damaged, thus enabling insistence on the control of risk factors to avoid heart attacks and stroke.

The members of the ARTER Group belong to the Primary Healthcare Centres of Metropolitana Nord and Barcelona Ciutat and have conducted this study at 28 CAPs in these territories.

IDIAP researchers study falls and malnutrition in the community in people aged 85 and over

The Octabaix Research Group of the IDIAP Jordi Gol, whose members are researchers from Metropolitana Sud, has developed a clinical trial on falls and nutrition in the community among people aged 85 years and over with the aim of evaluating an individualised intervention to correct this situation in this age group, reduce complications and analyse compliance with the recommendations made. The results of the study, conducted at 14 centres in Costa de Ponent and one in Catalunya Central, have shown that 30% of people aged 85 years and over suffer at least one fall per year, with 20% presenting a state of fragility and 50% a lack of vitamin D. Being female, suffering functional deterioration and maintaining a preserved cognitive state are factors associated with a greater risk of suffering falls.

The Octabaix Group also studied other factors associated with fragility such as, for example, risk of depression. In this sense, it highlights that one in every three octogenarians is at risk of suffering depression and that doing more physical exercise is associated with a lower risk. Moreover, a high prevalence of social risk exists among this population, which reaches 52% and is multiplied by three if the person studied is female and by six if living alone.

The ICS tertiary hospitals participate in an international study to validate a new treatment for ischemic stroke

The Vall d'Hebron, Clínic, Bellvitge and Germans Trias hospitals participated in an international clinical study called REVASCAT that may revolutionise the way ischemic stroke is treated. It started in the month of November 2012, was completed in December 2014, and around 200 Catalan patients participated in it.

In Catalonia, ischemic stroke (cerebral infarction) is the leading cause of death among women and the third among men as well as the leading cause of incapacity. Currently, the treatment of choice is thrombolytic agents, which are administered intravenously. However, this therapy has a very limited efficacy in severe and complex strokes in which the thrombosis is situated in a main artery of the brain (which occurs in some 25% of ischemic strokes). For this reason, for some time alternatives have started to be sought such as, for example, endovascular treatments – fundamentally mechanical thrombectomy – although this therapy has not been highly studied and the little research carried out to date offers contradictory results.

The REVASCAT study, the first effected on an international scale and with a high number of patients, has the objective of validating the effectiveness of latest-generation devices, applied through microcatheters, which consist of a stent that traps the thrombus and is then extracted.

Some 30% of people aged 85 or over suffer at least one fall each year, around 20% present a state of fragility and 50% a lack of vitamin D.

The REVASCAT study is the first on an international scale with a high number of patients and designed to validate the efficacy of the latest-generation devices.

Around 20% of kidney transplants are rejected by the patient.

A study shows that methane gas production does not worsen the response to fibre in constipation

Researchers from the Functional Digestive Disorder Research Group at Viladecans Hospital have carried out a study on the production of methane in response to treatment with fermentable fibre in constipation and in irritable bowel with constipation. This study, published in the journal *Neurogastroenterology and Motility*, has shown that the production of methane gas does not worsen the response to fibre in constipation and its results open up the doors to more in-depth study regarding the role of methane as a biomarker in functional constipation.

In addition to the three ICS tertiary hospitals, participating in the study are the Hospital Clínic in Barcelona, BarcelonaTECH (UPC) and the University of Pittsburgh.

The IDIBELL and the HUB develop a non-invasive test that identifies patients at risk of rejecting a kidney transplant

Researchers at the Bellvitge Biomedical Research Institute and doctors from Bellvitge University Hospital, together with a team of researchers from various American hospitals and universities, have developed a **genetic test** that identifies patients with a high risk of suffering rejection of a kidney transplant. Based on a sample of peripheral blood and an easy-to-run test, it is possible to find out, in a non-invasive way and before any dysfunction of the renal allograft, whether the immunological system of the patient will reject the kidney transplant.

The test should allow prior adaptation of immunosuppressive treatment to avoid immunological damage and the failure of the transplant. With this genetic test, the immunosuppressive treatment can be adapted more easily and without having to resort to invasive tests in patients with a high risk of suffering rejection. The researchers have developed, based on blood samples, an algorithm that allows classification of the risk of rejection of patients, in adults and children alike.

The research, published in the journal *PLOS Medicine*, analysed blood samples from patients with a kidney transplant to measure 43 genes with levels of expression that may vary during acute kidney rejection. In a first set of 143 blood samples and using a technique called polymerase chain reaction (PCR) it was determined that 17 of these genes can discriminate patients with a risk or not of suffering acute rejection, a risk previously diagnosed via biopsy. In total, 558 blood samples were analysed from 436 patients with kidney transplants originating from eight centres in the United States, Bellvitge University Hospital and Mexico.

XenOPAT, which offers mouse models for the personalised treatment of cancer, is launched

IDIBELL, the Catalan Institute of Oncology (ICO) and Bellvitge University Hospital have formed the spin-off company **XenOPAT, SL**, with the aim of offering society the latest advances at the service of the fight against cancer with two main branches: the development of new drugs and progress in the implementation of personalised cancer treatments.

The services offered by XenOPAT are based on the use of orthotopic mouse models (orthoxenograft®) through the implanting of small fragments of human tumours into the corresponding organ of the rodent, so that the animal model reproduces the histological, genetic and epigenetic characteristics of the human tumours, as well as their patterns of spreading, which is not achieved with other implant methods.

As regards the development of new drugs, XenOPAT offers researchers, but above all companies that are developing new drugs, a bank of dozens of models of orthotopic mice that reproduce different types of tumours characterised genetically and with different sensitivities to different chemotherapies. This bank, called OrthoXenoBank®, includes tumours of the colon, lungs, ovaries, endometrium, breast, pancreas, germinal tu-

mours, head and neck tumours, etc., thus offering a broad range of possibilities for testing new drugs on very advanced models that allow the best pre-clinical work possible, essential during the complicated process of developing drugs.

In the personalised medicine area, XenOPAT offers the possibility of generating an orthoxenograft® based on a patient's tumour, which means it will be possible to identify the treatment that offers maximum guarantees of response for each patient.

A biomarker that predicts the survival of patients with the most frequent type of kidney cancer is identified

Researchers from the **Renal Physiology Group of the CIBBIM-Nanomedicine of the VHIR**, in collaboration with the Urology and Anatomical Pathology Service of Vall d'Hebron University Hospital, have identified for the first time a new biomarker, known as pSTAT-3 Ser727, present in clear cell kidney carcinomas (ccRCC). This is the most aggressive and frequent type of all forms of kidney cancer, characterised by a lack of signs, symptoms or biochemical abnormalities which allow it to be detected) and that predicts the survival of patients.

The researchers confirmed, based on the presence of the biomarker in a tumoural sample, that tumours classified in the same risk group and that are apparently similar may behave in a very different way, determining patient survival time, which can vary between 17 and over 70 months.

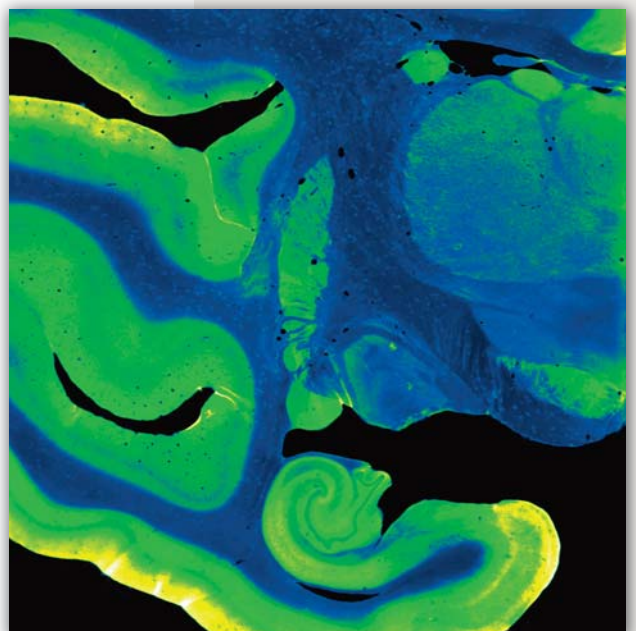
After confirming the results obtained *in vitro* for a cohort of 98 patients with ccRCC attended to at Vall d'Hebron Hospital, with over five years of clinical follow-up, it was concluded that what is apparently the most benign tumour may become as serious as the more invasive ones if biomarker levels are high. The study, published in **Cancer Research**, may lead to a change in paradigm in the care and treatment of these patients.

It is shown that a human protein may trigger Parkinson's disease

An **investigation led by the Vall d'Hebron Research Institute** has shown that pathological forms of the protein alpha-synuclein present in deceased people with Parkinson's disease are capable of initiating and spreading in mice and primates the neurodegenerative process that typifies this disease. The finding, published in **Annals of Neurology**, opens up doors to the development of new treatments that allow the progression of Parkinson's disease to be halted, and aimed at blocking the expression, pathological conversion and transmission of this protein.

Recent studies have shown that synthetic forms of alpha-synuclein are toxic for neurons, whether *in vitro* (cellular cultures) or *in vivo* (mice), and are able to spread from one cell to another. However, until now it was unknown whether the pathogenic capacity of this synthetic protein could be made extensive to the human pathological protein that is found in patients affected by Parkinson's disease and, consequently, whether it was relevant to the disease in humans.

The study, published in Cancer Research, may lead to a change in paradigm in the care and treatment of these patients.



The finding provides clues to possible mechanisms involved in the disease's start and progression, opening the doors to new therapeutic opportunities.

Four months after the injection of alpha-synuclein aggregates from the brains of patients who died with Parkinson's disease into mice and nine months after their injection into primates, these animals started to present degeneration of the dopaminergic neurons and intra-cellular accumulations of pathological alpha-synuclein in these cells, as occurs in Parkinson's disease. Months later, the animals also presented accumulations of the protein in other distant areas of the brain, with a spread pattern similar to that observed in the brain of Parkinson's patients after several years of disease progression.

Germans Trias successfully completes the clinical trial of a probiotic to prevent the development of tuberculosis

The Germans Trias Institute has completed with positive results a clinical trial in humans of a probiotic designed to prevent the development of tuberculosis in people at risk of infection, without the need to confirm that the bacillus is in their body. It is hoped that this food supplement, costing less than five euros per year, will benefit thousands of people, especially those in developing countries where tuberculosis causes the most deaths.

The probiotic, which causes no side effects and is safe, is based on the need for the body to tolerate the bacteria, instead of wanting to eradicate it. It is a creation of the Germans Trias Experimental Tuberculosis Unit (UTE), which manufactured it through inactivation by heat of a mycobacterium from the same family that causes tuberculosis, but that is present in the environment. The product was patented as Nyaditum resae® in the year 2013.



The next step was the creation of a spin-off company by the Germans Trias Institute, in collaboration with the Respiratory Diseases CIBER of the Carlos III Institute, to be able to produce and commercialise it. This led to the launch of Manresana de Micobacteriología, SL, **Manremyc**, which is working on its commercialisation in India. Since 1997, the UTE has worked on tuberculosis and it is known worldwide for its large number of innovative contributions relating to the causes of the disease. It has also created the Ruti Vaccine for the treatment of latent infection, which is currently being developed by biotech company **Archivel Farma**.

Germans Trias checks the hearts of over one hundred young Joventut players

The second call for the Germans Trias Talents grants, promoted together with the Catalunya-La Pedrera Foundation to promote work continuity for talented professionals through research, has enabled a project that will enjoy continuity. Thanks to the grant obtained by a young paediatric cardiologist, Germans Trias Hospital and Club Joventut de Badalona came to an agreement for the hospital in Badalona to exhaustively check the heart health of all players of the Penya from ages eight to 18 years. The aim of the project, in addition to clinical research, is to prevent sports players presenting unexpected illnesses during the ongoing practice of competition sports.

This is because apparently healthy young people and children may present cardiac health disorders that, during sports practice, could have serious consequences. The most frequent problem is hypertrophic cardiomyopathy, where the heart increases in size disproportionately to the sporting activity undertaken and often it has a genetic cause. The second most frequent are abnormalities in the coronary arteries, which take blood to the cardiac muscle. Overall, the incidence of these problems is low, but every year they cause 2.1 sudden deaths in every 100,000 sports-people.

Joventut has over 300 players who are aged between eight years and adult age. Like the rest of those forming part of the Penya, they undergo general medical check-ups periodically. The agreement with Germans Trias enables these children and young people to have a medical history that covers family backgrounds in cardiopathies and undergo a cardiological clinical examination and more specialised tests such as electrocardiograms and echocardiograms.

In the year 2014, over one hundred young people went through check-ups, and in those cases where a more in-depth cardiovascular examination was considered necessary, the diagnosis was complemented with other studies such as stress tests, registering of the heart's electrical activity over 24 hours, and magnetic resonance imaging.



Apparently healthy young people and children may suffer cardiac health problems that, during sports practice, could have severe consequences.

The cyclin D3 protein protects pancreas beta cells against attacks by the immune system in diabetes type 1

Diabetes type 1 or autoimmune diabetes (DT1) is caused by the destruction of the beta cells in the pancreas responsible for insulin production. The death of these cells is caused by the body's own immune system which, pathologically invades the pancreas with defence system cells (lymphocytes), destroying the beta cells as if they were agents alien to the body. The result is a lack of insulin in the body and, consequently, the incapacity to react to the presence of glucose in the blood. These are the results of the research led by the Biomedical Research Institute of Lleida and the University of Lleida (UdL), in collaboration with researchers from the University of Barcelona, the August Pi i Sunyer Institute of Biomedical Research and the Bioengineering Institute of the Miguel Hernández University in Elche.

A system for detecting colon cancer is developed that is pioneering in Spain

The IDIBGI and the University of Girona have created the biotechnology spin-off firm GoodGut, SL, the only company in the whole of Spain that designs both systems to support the diagnosis of digestive disorders and support for treatment based on the intestinal microbiota (gut flora).

GoodGut is developing a new system for the detection of colon cancer that functions as a biomarker to detect this disease at an early stage and effectively: the Risk Assessment for Intestinal Disease-Colorectal Cancer (RAID-CRC), an innovative system for the early diagnosis of colon cancer. It is based on a biomarker detected in faeces using a non-invasive technique that has highly specific and sensitive. In addition, it has a pre-diagnostic capacity, which means it can detect this cancer at a very early stage. The RAID-CRC enables identification of people who are developing colon cancer but are not yet presenting clinical manifestations, based on certain bacteria, as well as confirming those cases diagnosed as colon cancer, which also allows it to rule out the healthy population.

The objective is to introduce this test into the system as colorectal cancer screening, substituting the faecal occult blood test currently used. It will then only be necessary to perform colonoscopy on those people who have a positive test result with the RAID-CRC.

The researchers of the Basic and Clinical Research Group in Immunology and Endocrinology of the IRBLleida and the UdL have discovered that as a consequence of this attack by lymphocytes, the pancreatic beta cells produce less cyclin D3 protein, a phenomenon unknown to date. To validate this finding, the researchers have confirmed that experimental animal models of DT1 with an overproduction of cyclin D3 have beta cells in better conditions to resist the attack of the immune system and, consequently, they live longer and better. The result is that a milder version of DT1 appears and that responses to changes in blood glucose levels also improve. In contrast, when this cyclin D3 protein is absent, the DT1 is more severe and the response to glucose levels is altered. The results have been published in the journal of international impact *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*.

The Research Group ANESTARRACO leads the Programme on Teaching and Training of Surgical Cricothyrotomy

Not being able to oxygenate or ventilate a patient is a critical situation which is faced by physicians involved in airway management. This has led to the ANESTARRACO group, at the Pere Virgili Healthcare Research Institute, producing a Programme for the Teaching and Training of Cricothyrotomy using an animal model of a pig's trachea.

The new teaching method used during the course of the Programme consists of a theory phase on the indications, techniques, counter-indications and complications of cricothyrotomies, and a practical phase in which, once the need for learning surgical cricothyrotomy has been justified theoretically, participants carry out up to five cricothyrotomies each.

During the practical workshop, which has also been designed by the same research group, peer-review techniques are used through a checklist to improve the learning of the surgical technique. Finally, the students are assessed by monitors as they practice a sixth cricothyrotomy and by their answers to a questionnaire on theory.

The workshop combines invention – in the development of the pig's trachea model – with innovation – in the teaching methodology used – and is an activity accredited by the Catalan Council for Continuing Learning in the Healthcare Professions – Ongoing Training Committee of the National Health System.



► Teaching

Teaching and training across the entire range of health sciences, from university to specialised teaching, and including vocational and continuing training, constitutes a fundamental part of the activity carried out by the ICS centres.

In the year 2014, some 4,500 college and university degree students took part in work experience schemes at university hospitals and primary healthcare centres in areas such as Medicine, Nursing, Pharmacy, Dentistry, Biomedicine, Physiotherapy, Nutrition and Dietetics, Occupational Therapy and Social Work. Most came from the seven universities and ten university colleges that have agreements with the ICS.

Furthermore, the training of specialists is a central part of the ICS's teaching work. This training is completed with master's degrees and PhDs taught at the universities that collaborate with the institution. In the year 2014, close to 600 professionals completed their residency.

Vocational training is also an important branch, which is undertaken thanks to a collaboration agreement between the Education and Health ministries. Every year, the institution's centres play host to over 600 medium- or higher-grade vocational training students, who undertake over 500,000 hours of work experience.

Finally, continuing training is aimed at both ICS practitioners and external professionals, and in 2014 training stays were offered to over 300 national and foreign health sciences students.

The ICS maintains its commitment to the training of specialists in Catalonia

The aim of the ICS, which every year takes in some 2,300 residents, is to train professional practitioners prepared to create knowledge, tackle the new challenges of the healthcare system, and respond to the healthcare needs of the inhabitants of Catalonia. Each year, the offer is adapted to the needs of professionals and the teaching capacity of each of the centres. The collaboration between hospitals in different territorial regions to complement some of the highest-complexity training areas should be highlighted.

The training of specialist practitioners in Medicine, Nursing, Pharmacy, Psychology, Biology, Chemistry, and Physics has been the backbone of the teaching mission of the ICS centres since the inception of the MIR programme for residents over 30 years ago. This excellence in training is evident in the high level of attraction of the organisation's centres. In fact, Vall d'Hebron has remained among the first hospitals in Spain in terms of its capacity for attracting residents and, for another year, it has occupied one of the three top positions among the first 100 MIR places. In 2014, over 50% of all new residents came from the rest of Spain or from Latin American countries, where the ICS's centres are very highly valued in terms of the training they offer.

Teaching offer

The offer of places remained stable with respect to 2013 and continues to represent approximately half of hospital places and 75% of primary healthcare places in Catalonia.

	Accredited places	Places offered	Specialties
Vall d'Hebron	163	133	47
Bellvitge	97	84	42
Germans Trias	72	63	36
Arnau de Vilanova	40	36	27
Joan XXIII	37	32	23
Josep Trueta	37	35	24
Verge de la Cinta	11	9	9
Viladecans	1	1	1
Total	458	393	

	Accredited places	Places offered	Specialties
Barcelona Ciutat	92	58	2
Costa de Ponent	69	59	2
Metropolitana Nord	40	33	1
Catalunya Central	40	25	2
Girona	27	24	2
Tarragona	23	18	1
Lleida	22	15	2
Tortosa	12	8	1
Total	325	240	



Residents by speciality

Speciality	Total
Allergology	14
Anaesthesia and recovery	116
Anatomical pathology	29
Angiology and vascular surgery	16
Cardiology	67
Cardiovascular surgery	6
Clinical analyses	12
Clinical biochemistry	19
Clinical neurophysiology	5
Clinical pharmacology	12
Clinical psychology	13
Digestive system	44
Ear, nose & throat	17
Endocrinology and nutrition	25
Family and Community Medicine	739
General and digestive surgery	60
Geriatrics	4
Haematology and haemotherapy	42
Hospital pharmacy	37
Hospital radiation physics	6
Immunology	7
Intensive medicine	67
Internal medicine	113
Medical oncology	47
Medical-surgical dermatology and venereology	18
Microbiology and parasitology	12
Nephrology	30
Neurology	40
Neurosurgery	17

Speciality	Total
Nuclear medicine	10
Obstetrics and gynaecology	61
Ophthalmology	33
Oral and maxillofacial surgery	15
Orthopaedic surgery and traumatology	82
Paediatric surgery	8
Paediatrics	117
Physical rehabilitation	33
Plastic, aesthetic and reparative surgery	16
Preventive medicine and public health	10
Psychiatry	39
Pulmonology	32
Radiation oncology	15
Radiodiagnosis	59
Radiopharmacology	2
Rheumatology	16
Thoracic surgery	3
Urology	31
Total resident physicians	2,218

Family and Community Nursing	20
Mental health	2
Obstetrics and gynaecology	41
Paediatrics	12
Total nursing interns	75

Total	2,293
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Workforce equivalent to full-time for the year 2014.
Source: Khalix Recursos Humanos.



The 8th ICS Specialised Healthcare Training Conference debates on residents' preferences and the system's offering

During the month of October, the 8th ICS Specialised Healthcare Training Conference was held at Vall d'Hebron Hospital, together with the 16th Conference of the Teaching Committees Network of Catalonia. The conference, titled "Teaching Centres. Residents' Preferences and the System's Offering", shed light on the priority criteria of future residents in choosing a training place, the differences in criteria between those choosing hospital specialities and those choosing family and community medicine, the capacities of the different specialities to attract candidates and the difficulty in responding to expectations among some of those least requested.

Over the course of the conference, issues were covered that affect the two agents of the system: the teaching centres and the residents, with debates on the different motivations when offering training places, the decision to apply territorial criteria to applications, the importance that quality criteria must have in future offerings and the opinion on whether it should be the Administration or the future resident who decides which are the training places that end up being occupied.

In terms of Catalonia, issues were raised such as the discordance between the accredited specialised healthcare training places and the places offered annually, the difference in capacity to attraction candidates between large centres and medium or small centres – which offer a less diverse caseload and less complexity – and also the relative global position of specialised training places in Catalonia with respect to other autonomous communities in the major specialities.

Vall d'Hebron receives a very positive assessment in the teaching audit carried out by the Spanish Ministry of Health

The audit, undertaken during the year 2014, highlighted as the Hospital's strong points: the integration of teaching into the management structures; its organisation; the existence of a very defined specific strategic plan; the high capacity of its training for attracting candidates; the teaching quality plan and its coherence with the Hospital's strategic plan and the system of regulatory and documentary development with the register and the systematic documentary coding. Other elements that were assessed very positively were the teaching intranet and website, the design of training guides or itineraries and their circuit of production and approval, the conceptual design – of high professional standards – of the training and assessment by skills, the organisation and functioning of the tutorials, the system of selection, accreditation and assessment of tutors, as well as the specific training offering.

Barcelona Ciutat awards the first XB Grant for the doctoral thesis of a fourth-year medicine resident

The Multi-professional Teaching Unit for Family and Community Healthcare within the Primary Healthcare sphere of Barcelona Ciutat has awarded, for the first time, the XB Grant for the undertaking of a doctoral thesis. Its aim is to promote the materialisation of the doctoral thesis



A training experience reinforces the knowledge and safety of R1 residents prior to commencing their healthcare work

The Teaching Committee of Bellvitge University Hospital has presented the results of the Induction Programme that it has developed jointly and in a unified way for all new residents (R1) of Metropolitana Sud (HUB, Viladecans Hospital and the Costa de Ponent Family and Community Medicine Teaching Unit). This Programme consists of a theoretical and practical course in medical and surgical emergencies, of 100 hours in duration and geared towards the discussion of the most prevalent emergency clinical cases and the conducting of 12 simulation workshops for clinical skills with the aim of facilitating the induction of R1s, as well as improving patient safety.

The unified teaching for R1s, both from the hospital and from the primary healthcare of the catchment area, allows the same knowledge to be taught, thus harmonising action criteria. The theoretical course is taught by specialist physicians and the workshops, by Senior Residents (RS). During the period 2004-2014, a total of 1,341 R1s have taken part in the Programme. Some 86% of these participants considered the Programme useful for improving knowledge and 77% modified their approach when faced with an emergency situation. The degree of satisfaction with the workshops was 87%.

of a fourth-year resident after they complete their training period in the sphere. The grant consists of a contract of 30 hours per week during one year and has benefited from the collaboration of the Support Unit for Research in the Sphere.

The grant was awarded during the XB Grants Conference which took place during the month of June, where annually the names of those projects receiving these research incentives are made public. In 2014, for the seventh year running, a total of 2,400 hours for the development of research projects led by professionals in the sphere were offered, along with 2,100 hours for the undertaking of training stays of ICS primary healthcare practitioners of Barcelona Ciutat who want to update their knowledge and skills.

Germans Trias implements simulation in the training of its resident physicians

During the 2014-2015 academic year, an important step was taken to introduce simulation into the learning of residents at Germans Trias Hospital. This is a tool that allows the acquiring of diagnostic and therapeutic skills without applying them to patients but via devices that function like the human body.

Thanks to simulation, residents have been able to train in laparoscopic surgery and in cardiopulmonary resuscitation in adults, children and babies. It is envisaged that the use of simulation will grow year after year.



The Teaching Unit at Metropolitana Nord adapts the expectations of residents to the work offered

In the year 2014, an online survey was given to family and community medicine residents who completed their training in primary healthcare at Metropolitana Nord in the month of June. This survey noted the professional interests of the residents, their professional experience prior to starting the residency, the optional rotations chosen and their active participation in research activities. The response rate was 60% and this has allowed the professional expectations of residents to be adapted to the needs and job offers of the DAP Metropolitana Nord.

The large majority of residents opted first of all to work in a primary healthcare centre. Of these, 10% are currently working at the primary healthcare centre where they trained, 42% at primary healthcare centres in the same territory where they undertook their residency and 21% at other ICS primary healthcare centres. Three residents opted to go abroad

to work or to other autonomous communities in Spain. Of the residents who manifested an interest in research, two had started their doctoral thesis, combining this activity with their healthcare work and one obtained a research grant from the Novartis Chair in collaboration with the IDIAP Jordi Gol.

Residents have satisfactory opinions on their training period at the ICS's teaching centres in Catalunya Central

The Catalan Ministry of Health's survey regarding the satisfaction of specialists who have trained in family and community medicine and nursing shows the high score that residents have awarded to the ICS's teaching centres in Catalunya Central. Some 63% of those surveyed considered that their experience with the Teaching Unit was good or very good, 96% know their Training Plan and the time planning of shift changes, 30% know the criteria on which they are assessed and 50% view as correct the facilities offered for the learning of techniques and procedures.

The training activities were given a rating of good to very good by 95% of the residents. Meanwhile 72% were of the opinion that the cross-disciplinary training received at the healthcare units is good or very good. As regards the healthcare sphere, 75% rate as very satisfactory the contribution to learning of the night shifts that they carry out and 65% consider that the number of hours spent on night shift is sufficient. A total of 91% consider that the number of residents from other units that coincide during their shifts does not affect their training activity.

Some 45% of those surveyed gave the work of the tutors taking part in their training process a rating of excellent, while 50% considered it good or very good. All the residents scored at 100% the degree of learning reached during the training period.

Graduation of the first promotion of physicians from Girona, trained partly at the Trueta

In the year 2014, the first promotion of physicians trained at the Faculty of Medicine of the University of Girona graduated. They undertook a large part of their practical training at Dr. Josep Trueta University Hospital in Girona and also at some of the primary healthcare centres in the Girona catchment area.

The Faculty has made a commitment to problem-based learning and the results obtained by this first promotion will be important in determining the teaching model. In these six years, the implication of the Trueta in terms of loaning spaces to the University and, above all, of its professionals who have combined their healthcare and teaching work, has been fundamental.

Around 40 family physician tutors from Camp de Tarragona share their experiences in Salou

In November, the first meeting of tutors was organised by the Family and Community Medicine (MFIC) Teaching Unit of the ICS in Camp de Tarragona. Its aim was to encourage dialogue and exchanges of opinions and

The teaching units of Costa de Ponent and Lleida choose blogs as a tool for communication with residents

Introducing the primary healthcare teams and the teaching hospitals in the territory, reporting on regulations and training activities for students preparing to become family doctors and guiding them on the MIR exams and the future changes to core subjects are some of the objectives of the blogs of the Family and Community Medicine teaching units of Costa de Ponent and Lleida. With these new, faster and more direct communication channels, the teaching units aim to establish two-way communication with residents and their tutors, providing them with useful information and hoping to receive their comments and concerns.

The **Lleida Teaching Unit blog**, which during the year 2014 reached 10,000 visits, has become consolidated and is very highly valued by residents. As regards the **Costa de Ponent Teaching Unit blog**, it has now reached 3,120 visits.

Lleida welcomes the first resident intern nurses

In 2014, the two first resident intern nurses (EIR) began their period of training in primary healthcare in Lleida. In addition, online training began for residents with a course in family care taught by third- and fourth-year resident physicians. It should also be highlighted that five resident physicians have achieved post-MIR grants, offered by the Biomedical Research Institute of Lleida with the patronage of the Provincial Council, which allows them to develop their research projects and simultaneously combine them with healthcare practice for two years.

Moreover, in a coordinated way with Arnau de Vilanova Hospital Teaching Committee, a shared project of cross-disciplinary theoretical training has been launched designed for residents of all specialities that are practised in Lleida and focusing on management, quality and patient safety and communication.

experiences between the MFIC tutors in the territory based on presentations of the best training initiatives by the primary healthcare teaching centres.

The leaders of the meeting highlighted the importance of and need to include research in this medical speciality, as well as the forthcoming entry into force of core subjects in specialised healthcare training.

New Basic Training Programme in innovation for tutors of residents at Joan XXIII Hospital

In June, the Teaching Committee, together with the support of the Continuing Training Department of Joan XXIII Hospital, organised a Basic Training Programme for the tutors of residents. The workshop, which was attended by a total of 20 tutors, dealt with aspects of teaching and research and promoted the creation of a work group in innovation at the Hospital. It was directed by Professor Francisco Andrade and taught by the Innovation Hub of the Rovira i Virgili University in Tarragona.

The Multi-Professional Obstetrics and Gynaecology Teaching Unit of Verge de la Cinta – ASSIR Terres de l'Ebre, an ICS pioneer in water birth training for residents

Within the natural birthing care project, the Obstetrics and Gynaecology Service of Verge de la Cinta Hospital in Tortosa has progressively introduced water births since 2007 with the aim of improving care for normal births and ensuring personalised care, focusing on each woman's particular needs.

The residents of this Service, who are attached to the Multi-professional Obstetrics and Gynaecology Teaching Unit of the Hospital – ASSIR Terres de l'Ebre, have the opportunity of receiving training in water births in a way that is fully integrated into the centre's activity.

Moreover, the delivery room midwives organise specific courses, open to professionals and residents from other centres in Catalonia.



► Healthcare Professionals

Human Resources¹

	Females	Males	Total
Primary Healthcare	13,825	4,506	18,331
Physicians	3,626	2,149	5,775
Nursing and other healthcare professions	6,130	626	6,756
Residents	509	250	759
Management and services functional area	3,560	1,481	5,041
Hospitals	14,692	5,011	19,703
Physicians	1,529	1,655	3,184
Nursing and other healthcare professions	9,862	1,120	10,982
Residents	1,004	530	1,534
Management and services functional area	2,297	1,706	4,003
Corporate Centre²	259	139	398
Total health professionals	28,776	9,656	38,432

1. Workforce equivalent to full-time for the year 2014. Includes permanent, casual, temporary and substitute staff.

2. Includes staff assigned to external non-healthcare centres (Catalan Ministry of Health, CatSalut, etc.).

The ICS improves the job stability of its staff

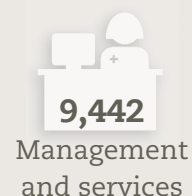
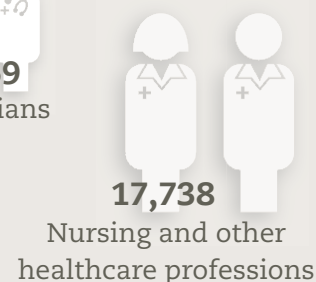
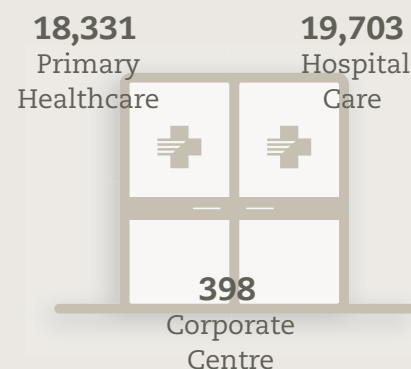
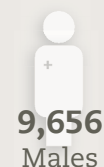
The number of ICS professionals that are in a stable work situation grew during the year 2014. From the start of the year, the organisation intensified actions to be able to stabilise the job situation for the largest number possible of staff with temporary contracts. Specifically, substitution contracts were given to a total of 2,345 workers (24.22% doctors, 40.21% healthcare diploma-holders, 20.94% healthcare staff with advanced and intermediate vocational training qualifications and 14.63% management and services staff).

A reduction in temporary work is one of the strategic objectives of the Human Resources Department. Until the announcement of new public entrance exams that allow the number of permanent staff to be increased, the mechanism that the institution uses to provide stability for its workforce are substitution contracts.

At present, some 86.24% of the public company's employees have a stable job contract, i.e. they have either a permanent or a substitution contract.

90% of staff members who apply for professional upgrading obtain it

Nine out of every ten ICS professionals who participated in applications to upgrade their professional classification in 2014 obtained their upgrade. In total, of the 3,427 people who made a valid application, 3,084 obtained the upgrade they had requested, 1,371 of them for the first time.



The ICS grants full-time status to 100 specialist physicians

To be able to tackle the growth in healthcare activity, the ICS increased the ordinary working hours of 100 specialist physicians. For this purpose, a budget of one million euros was allocated, which has been distributed on an equitable basis between the organisation's eight hospitals. Thus, the 100 professionals, in exchange for an annual salary complement, increased their production with working hours increasing from 1,650 to 1,728 hours.

Each centre, according to objectives and needs, has assigned the people in receipt of these allocations of working hours and determined the healthcare activity that they have to take on (increase in surgical interventions, opening of operating theatres and outpatient consultations in the afternoons, action on waiting lists, etc.). This increase is to be maintained during the year 2015.

New profiles in the jobs bank

In response to the different organisational needs and to provide services to citizens, the ICS defined new professional profiles and updated some of those that already existed, which have been incorporated into the temporary jobs bank:

- Emergency triage nurse
- Ophthalmologist specialising in retinas
- Quality technician
- Virtual training technician



By levels, 1,022 people obtained level 1; 771, level 2; 581, level 3, and 710, level 4. By categories, those who achieved the professional career level applied for comprised 856 physicians, 1,157 holders of healthcare diplomas, 532 professionals with healthcare vocational training qualifications, 413 administrative staff, 120 staff who carry out support tasks and six skilled tradespersons.

The ICS announces a specific voluntary mobility competition aimed at staff with Nursing diplomas

In accordance with the agreement to facilitate the voluntary mobility of the institution's statutory staff, signed by the ICS and the trade union organisations represented at the Healthcare Sector Negotiating Table (with the exception of Physicians of Catalonia) during the year 2014 the planned first phase of calls for voluntary mobility competitions were carried out.

Specifically, the ICS made a call for healthcare professionals holding a diploma in nursing in primary healthcare and hospitals, who were able to participate in the competition to apply for places offered in their sphere of professional activity (primary healthcare services or hospitals).

At the hospitals, 489 places were offered and 173 allocated, while in primary healthcare 721 places were announced and 399 were allocated.

Eight out of every ten ICS staff have undertaken ongoing training

In the year 2014, some 78% of professional staff at the ICS followed some type of continuing training activity. This percentage does not include residents or substitutes. The overall hours offered totalled 1,123,188, a figure that represents an average of 32.3 hours per worker.

As regards distribution by thematic areas, some 45.3% of the hours were devoted to the healthcare area, with 6.7% to the management and services area and 48% to cross-disciplinary areas. The latter were distributed fundamentally between communication (26.7%), quality and continuous improvement (24.7%), information technologies (19.6%), and work safety and risk prevention (16.5%).

At the same time, virtual training continued to be strengthened through the Campus, which has grown by 64% with respect to the previous year. A total of 139 courses were taught, with 423 editions and 34,923 students admitted. In addition, 70 courses were conducted in semi-attendance mode with 2,157 students admitted.

Around 9,000 ICS staff members receive training on action procedures in response to suspected possible Ebola cases

During the month of October, the ICS conducted a total of eight reinforcement training sessions on how to act before a suspected case of possible Ebola, aimed at primary healthcare professionals across the entire territory. The aim of these sessions was to address doubts, agree circuits and guidelines for action when a case is suspected. They informed on new introductions into the action protocol for dealing with suspected cases of haemorrhagic fever due to the Ebola virus produced by the Public Health Agency (ASPCAT), which is the competent body with respect to epidemiological surveillance and health protection in Catalonia, while also placing stress on the proper use of personal protection equipment.

In total, 8,736 primary healthcare and hospital staff obtained the attendance certificate for at least one of the 417 activities related with training for Ebola. These were of two types: in some, the epidemiological aspect of the disease was explained (history and situation of the outbreaks in Africa, warning symptoms, etc.) along with the detailed presentation of the specific action procedure. In other, eminently practical sessions, staff were trained in the proper use of individual protection equipment. These training sessions have been reproduced around the territory in order to reach the maximum number of staff at all centres.

As regards training in hospitals, since the month of September, sessions have been organised aimed at emergencies staff (medical, nursing, nursing auxiliary, porters and administrative personnel) and other staff directly involved in the action procedure (night shift managers and cleaning staff who have to act once the patient is transferred).



The Government awards a Josep Trueta Medal for healthcare merit to four ICS staff members

Four ICS staff members have been distinguished with a Josep Trueta Medal for healthcare merit. They were: gynaecologist Lluís Cabero, pulmonologist Ferran Morell, thoracic surgery specialist Mercè Canela – all three from Vall d'Hebron University Hospital – and family and community medicine specialist Carlos Martín from the CAP Passeig de Sant Joan in Barcelona Ciutat.

The aim of these awards is to distinguish people and organisations who have contributed towards improving healthcare in a significant way. The award ceremony took place on 25 September at the Palace of the Generalitat.

The Legal Advisory Service continues defending the interests of the ICS and its staff

The Legal Advisory Service's activity can be split between four main areas. The Advisory Affairs Area, which produces reports on collaboration agreements and legal consultations and represents the institution in procedures related to appeals regarding late payment interest and contracting. It undertook 949 actions in the year 2014. The Labour Affairs Area, which legally represents the institution in procedures presented by employees against the ICS, both in the contentious and the social sphere. It won 435 cases and lost 75. The Assets Liability Claims Area, which deals with administrative assets liability cases and represents the institution in contentious cases. It won 124 of the 164 assets claims lodged. And finally, the Penal Affairs Area, which legally advises and represents the ICS in penal procedures. It successfully processed 95 cases, while 29 were totally or partially rejected.



Nearly 900 ICS administrative staff share good practices in Granollers

The Auditorium in Granollers hosted the **7th Conference of Administrative Staff of the Catalan Health Institute**. At this meeting, issues tackled were related with confidentiality of information, patient safety, citizen participation and coordination between different healthcare levels. With the aim of dealing with the state of user service from all viewpoints, participants in the conference included ICS staff, users and members of citizens' associations.

During the day prizes were also awarded for the best spoken communication, the best video communication, the best poster and the best virtual activity, which went to the following staff members:

- Prize for the Best Spoken Communication for Mercè Verdaguer, of the Primary Healthcare Service (SAP) Vallès Oriental, dealing with the management of referrals returning from the Granollers Hospital to primary healthcare.
- Prize for the Best Video Communication for Núria Esquina, of the SAP Barcelonès Nord i Maresme, on the reception at the centre as a tool for improvement and quality.
- Prize for the Best Poster for Rosa Maria Gasulla, of SAP Anoia, on how the opinion of citizens expressed through complaints helps to improve the task of administrative staff. This poster was selected from among a total of 100 presented and 14 finalists through voting by the participants before the Conference and during it.
- Prize for the Best Virtual Activity for Núria Peral, of the Primary Healthcare Department of Metropolitana Nord, and Neus Jové, of Verge de la Cinta University Hospital in Tortosa, for "Treasure Hunt", an activity in which participants had to contribute ideas and resources for the professionalisation of healthcare administrative staff.

Twenty ICS staff members are selected for an Excellence Award by the Association of Physicians of Barcelona (COMB)

The Official Association of Physicians of Barcelona (**COMB**) selected 20 professionals from the ICS to receive Professional Excellence Awards, as well as the Primary Healthcare Team of La Gabarra, in Cornellà de Llobregat, and the Cardiology Service of Vall d'Hebron University Hospital. The awards were presented on 2 December at the Teatre Romea in Barcelona.



The Awards for Professional Excellence were launched in the year 2004 and are granted in the spheres of hospital medicine, primary healthcare, public and mental health, social care, biomedical research, medical education and medical humanities.

The ICS staff members receiving awards this year were: Javier Ariza Cardenal (HUB), Joan Azemar Mallard (EAP Sagrada Família I Manresa), Fernando Azpiroz Vidaur (HUVH), Ana María Bertolín Arnau (EAP Numància), Francesc Bosch Albareda (HUVH), Josep Àngel Bosch Gil (HUVH), Ramon Ciurana Misol (EAP La Mina), Montserrat Farrús Palou (CAP Carmel), Elisenda Florensa Claramunt (EAP Igualada Urbà), Roser Garcia Guasch (HUGTiP), Montserrat Giménez Pérez (HUGTiP), Laura Gómez i Orgillés (EAP Lluís Millet I Esplugues de Llobregat), Andrés Marco Mouriño (EAPP Model), Manel Mata Cases (EAP La Mina), Manuel Matas Docampo (HUVH), Núria Montellà Jordana (UDMFic Metropolitana Nord), Francisco Javier Peligro Adarve (EAP Martorell), Pilar Roura Olmeda, (EAP Badia del Vallès), Manuel Sans Segarra (HUB) and José María Verdú Rotellar (EAP Sant Martí de Provençals).

300 staff health sector professionals run the 21st Catalan Healthcare Athletics Race around Germans Trias Hospital and the Can Ruti Campus

Three hundred health sector professionals from the health and biomedicine sphere in Catalonia took part in May in the 21st Catalan Healthcare Athletics Race which is organised by Germans Trias i Pujol University Hospital. The competition covers a route of some 10 kilometres around rural tracks near the Can Ruti Campus and the Sierra de Marina hills near Badalona.

The winners in the overall category were Jessed Hernández, from Transporte Sanitario de Cataluña SLU, with a time of 35 minutes and 33 seconds, and Carmen Auñón, of the Catalan Institute of Oncology, who recorded a time of 45 minutes and 9 seconds. Both had already taken their place on the podium in previous editions of the race.

In the category of male teams, the fastest were the staff of Vall d'Hebron Hospital, while those of the Sant Joan de Déu Healthcare Park and those of Germans Trias Hospital came second and third, respectively.

As regards the female teams, the first classified were the runners of the Parc Taulí Hospital Consortium, followed by those of the Hospital Clínic i Provincial in Barcelona and those of the Sant Hospital Foundation in Seu d'Urgell.



Care satisfaction indicators in specialised outpatient care

	Global satisfaction level	Loyalty (%)
Arnau de Vilanova Hospital	8.06	82.1
Bellvitge Hospital	8.00	90.0
Germans Trias i Pujol Hospital	8.18	91.0
Joan XXIII Hospital	7.91	86.3
Josep Trueta Hospital	8.41	94.9
Vall d'Hebron Hospital	7.68	84.2
Verge de la Cinta Hospital	8.30	89.9
Viladecans Hospital	7.44	75.6
CAE Dr. Barraquer	7.65	77.6
CAE Just Oliveras	7.09	72.5
CAE Santa Coloma de Gramenet	7.50	83.8
ICS	7.83	84.4
Catalonia	7.81	82.9

► Citizens

ICS users give a high score to specialised outpatient care

Users of the ICS gave an overall score of 7.83 to the care they receive at the specialised care outpatient consultancies located at hospitals and some primary healthcare centres. The degree of loyalty is also high and stands at 84.4%, which means that of every 1,000 people interviewed, 844 answered that they would like to receive care at the same centre again. These data are extracted from the results of the Satisfaction Surveys Plan (PLAENSA) 2014 of the Catalan Health Service (CatSalut) on specialised outpatient healthcare. In the global assessment, the average of the ICS centres slightly exceeded those of all centres in Catalonia, which stands at 7.81. In the loyalty indicator, the difference with the average for Catalonia (82.9%) is greater.

The survey contains 17 questions relating to the degree of satisfaction with respect to waiting times, conditions of the facilities, quality of healthcare, information provided to patients, attitude of healthcare professionals to patients, coordination between family medicine professionals and other specialists, and monitoring of the health problem. In addition, a question is added referring to the degree of overall satisfaction and another on loyalty.

The study includes the 46 centres that offer specialised outpatient care in Catalonia, 11 of them managed by the ICS: the hospitals Arnau de Vilanova in Lleida, Joan XXIII in Tarragona, Verge de la Cinta in Tortosa, Doctor Josep Trueta in Girona, Vall d'Hebron, Germans Trias i Pujol, Viladecans and Bellvitge, as well as the Specialised Healthcare Centre (CAE) Dr. Barraquer in Sant Adrià de Besòs, the CAE Santa Coloma de Gramenet and the CAE Just Oliveras in L'Hospitalet de Llobregat.

The centre that obtained the best score from users in specialised outpatient care in Catalonia was Josep Trueta Hospital in Girona, which was given an overall score of 8.41 and obtained a loyalty rating of 94.9%. Also outstanding were the results of Verge de la Cinta Hospital, with a global score of 8.26 and a loyalty score of 89.9%; those of Germans Trias Hospital, which is rated with a score of 8.18 and a loyalty rating of 91%, and those of Bellvitge Hospital, which scored 8.00 with a loyalty rating of 90%.

In general, the ICS users especially highlighted the time that the specialist devoted to them, the information received, the attitude of doctors towards them and the monitoring of their health problem. Among the aspects ranking below the average of Catalonia, prominent were those referring to waiting rooms: comfort, time of stay in the waiting room and number of people waiting.



The programme **Pacient Expert Catalunya®** has now reached **185 primary healthcare teams and two hospital units** of the ICS

The programme **Pacient Expert Catalunya®** (PPE-CAT®) has now spread across the entire territory. Since it was launched, in 2006, a total of 185 ICS primary healthcare teams have joined along with the Respiratory and Heart Failure Units at Bellvitge Hospital. Over the course of 2014, a total of 1,124 new patients participated, of which 58 have acted as expert patients, and a total of 101 groups have been set up: nine for heart failure, 28 for oral anticoagulant therapy, 12 for chronic obstructive pulmonary disease (COPD), 32 for type 2 diabetes, four for quitting smoking, two for fibromyalgia, three for anxiety and, finally, a pilot test for breast cancer survivors was undertaken at the ASSIR of the SAP Baix Llobregat Centre. Furthermore, 107 healthcare professionals have been trained who act as observers of the different programme groups.

As new features in this period, worthy of highlight is the running of a non-pharmacological clinical trial of the PPE-CAT® in type 2 diabetes, led by Catalunya Central, in which a total of 500 people with diabetes participated along with staff of the organisation from 24 primary healthcare centres in Catalunya Central, Barcelona Ciutat and Baix Llobregat, whose aim is to determine the benefits of participating in the PPE-CAT® for type 2 diabetes that, in recent years, has been carried out in the organisation's primary healthcare sphere. This investigation, which will be completed in 2015, is being funded through a grant from the Official Nursing Association of Barcelona and was one of the runner-up projects at the 3rd Catalonia Health Plan Conference held in Sils in December 2014.

Another significant event was the active participation of ICS healthcare professionals (doctors, nurses and social workers) on writing up the guides and educational material of the PPE-CAT® for depression and obesity, as well as the development of the contents for the new programme line for carers: **Cuidador Expert Catalunya®**.



26 ICS primary healthcare teams participate in the **Cat@Salut La Meva Salut pilot test**

A total of 26 ICS primary healthcare teams took part in the pilot test that the Catalan Ministry of Health, through CatSalut and with the cooperation of the TicSalut Foundation, began in October to facilitate access for the public to **Cat@Salut La Meva Salut** (CatSalut My Health), a digital, personal and non-transferrable space for consultation that enables adults

Expert patients are people affected by a chronic disease who are capable of taking responsibility for their illness and of taking care of themselves, identifying symptoms, responding to them, and acquiring tools to manage the physical, emotional, and social impact.

The groups they lead aim to promote lifestyle changes that improve quality of life in all patients through exchanging knowledge and experience in a complicit and empathetic environment.

to have access to their health information in a secure and confidential way, as well facilitating electronic processes for them.

Cat@Salut La Meva Salut contains the information generated during the patient's attendance at any of the centres that form part of the Integrated Public Healthcare System of Catalonia (SISCAT).

Among the information that citizens can access, worthy of highlight are the most relevant health data published by the healthcare provider centres that are contained in the **Shared Medical History of Catalonia**, their medication plan, vaccinations administered, diagnoses, clinical reports (emergencies, admissions, outpatient care), the results of tests and complementary examinations generated in their medical care. They can also carry out personalised procedures and tasks online.



During the last quarter of 2014, the 26 EAPs of the ICS that participated in the pilot test (of a total of 33 EAPs in the entire territory) have facilitated over 2,600 passwords for access to Cat@Salut La Meva Salut. During 2015, this password will be able to be requested at all primary healthcare centres in Catalonia.

The ICS international health units offer the possibility of booking an appointment online

Since the month of July, people who need advice and vaccination before travelling to a country considered to be a health risk may book an appointment in advance online, at any of the ICS international health units via the following website address www.ics.gencat.cat/salutinternacional. In the second half of the year, nearly one thousand people had already booked an appointment online.

This option is added to the possibility of booking an appointment via the exclusive telephone numbers 93 326 89 01 and 902 111 444, which are also used for programming appointments at primary healthcare centres.

The ICS has nine international health units across the entire territory: Vall d'Hebron-Drassanes, Metropolitana Nord, Bellvitge, Baix Llobregat Centre, Anoia, Bages-Berguedà, Osona, Terres de l'Ebre and Lleida.

Institut Català de la Salut
Generalitat de Catalunya
Departament de Salut

Mapa del web | Ajuda | Crèdit | Info legal | Català | Castellà | Inicial

Professionals | Proveïdors | Info Corporativa

Unitats

Si marxes de viatge, no et descuidis la salut

Un viatge exigeix sempre una preparació adequada, que inclouï una correcta informació sanitària del país de destinació, així com dels riscos i les precaucions que cal prendre per gaudir-ne amb bona salut.

Abans de qualsevol viatge a un país considerat de risc per a la salut, convé fer una consulta a una unitat especialitzada de salut internacional.

Les unitats de salut internacional de l'Institut Català de la Salut us ofereixen els serveis de consell al viatger, la vacunació internacional i atenció a la patologia importada després del viatge.

Programació de visites de salut internacional | Inicial

Pas 1: Identifiqueu-vos

És imprescindible la vostra identificació mitjançant el codi d'identificació personal (CIP) de la vostra targeta sanitària individual, sense espais entre les 4 lletres i els 10 números.

Introduïu el codi d'identificació personal (CIP)

Continuar

Podem programar-vos una visita a qualsevol unitat de salut internacional, amb independència del vostre lloc de residència.

Tingueu a mà la vostra targeta sanitària

Informació general | Taxes i preus públics

PROSICS

The unification of the international health appointment booking facilitates access to any of these units, which have different availabilities of dates and times, so that every traveller can choose the centre where they wish to request an appointment according to their needs and independently of their area of residence.

The ICS's International Health Programme (PROSICS) was launched in 2013 with the aim of integrating the units already existing in Catalonia and their expertise in the fields of the healthcare and vaccination of the international traveller and the treatment of imported diseases. In addition to their healthcare activity, all these units have carried out numerous teaching and research activities. The International Health Unit of Santa Caterina Hospital in Salt, managed by Institut d'Assistència Sanitària, also forms part of the PROSICS.

Over a thousand school pupils visit ICS healthcare centres

Over a thousand pupils from different infant, primary and secondary schools have visited ICS primary healthcare centres in the towns where they live and some of its hospitals, such as Germans Trias, Dr. Trueta, Verge de la Cinta and Viladecans, as well as the research institutes of Vall d'Hebron and Germans Trias.

This is an activity that offers youngsters a light-hearted approach to the task of healthcare professionals and the internal functioning of the centres. During these visits, younger children become acquainted with the facilities, learn how medical check-ups are carried out or, for example, learn the importance of good hygiene habits, of a healthy diet and of doing physical exercise. In the case of older children, the objective of visits is to give them an introduction to the institution, inform them about career prospects in the healthcare sphere and, at the same time, to tackle aspects of health prevention and promotion.



Communication of news through the media, a key channel for informing the public about institutional projects

Apart from communicating contents through web channels and the social networks, maintaining ongoing contact with the media and proactively reporting on healthcare, teaching and research projects and activ-

ities taking place at the ICS centres is a corporate strategic objective to ensure that the general public are aware of all that the institution does.

To this end, during the year 2014, over 550 press releases were issued, both from the Corporate Centre and also from hospitals, primary healthcare centres, and research institutes linked to the ICS. At the same time, staff attended to nearly 5,000 requests from the media, both printed media and others, such as radio, television and digital media.

This planned and systematic external communication policy of positive news has allowed a spotlight on all the activity carried out in the largest public health services company in Catalonia, such as pioneering surgical interventions, advances in significant research and successful healthcare experiences practised at the different centres.

The ICS centres join in the Smoke-Free Week

Primary healthcare staff offered advice to patients who are smokers on quitting the habit during their usual medical appointments. Since the ICS committed to incorporating this service into the routine healthcare work of primary healthcare staff, the number of patients who have stopped smoking has increased considerably. Thus, in the year 2014, over 52,000 people attended to at primary healthcare centres stopped smoking.

Coinciding with the 15th Smoke-Free Week, the ICS primary healthcare teams organised different activities aimed at raising awareness among the general public about the risks that smoking represents for health: competitions for students in the territory, community sessions, CO-oximetry measurements, health advice on healthy lifestyle habits, information tables and the distribution of informational material, among others. Furthermore, and on an internal basis, activities have been organised and advice communicated in order to encourage healthcare professionals to give up smoking too.

As regards the hospitals, Bellvitge, Germans Trias, Josep Trueta, Vall d'Hebron, Verge de la Cinta and Viladecans have also joined the awareness-raising campaign on smoking with the measuring of CO-oximetry, carboximetry and spirometry, tests that serve to find out how tobacco smoke affects people. They also exchanged gifts for cigarettes, screened videos of Stop Smoking campaigns, etc. In addition, the General Area of Vall d'Hebron Hospital obtained Gold Level from the Global Network for To-



bacco-Free Health Services (ENSH-Global), in recognition of the efforts being made at healthcare centres that have shown important advances in their policies for controlling smoking and that set an example for other organisations in the fight against smoking.

Users and professionals go out walking to celebrate **World Physical Activity Day**

On the occasion of World Physical Activity Day, which is held on 6 April every year, the ICS's health centres, in collaboration with the Physical Activity, Sport and Health Plan (PAFES), organised numerous initiatives to promote a healthy lifestyle.

Groups of walkers comprising users and professionals from the primary healthcare teams of the entire territory organised popular walks of greater or lesser difficulty levels and also planned sessions for beginners in sports for children and dance workshops.

Moreover, talks were held, information tables organised and communication materials were distributed to raise awareness among the general public that the practising of regular physical exercise reduces the risk of suffering cardiovascular diseases, certain types of cancer, diabetes and obesity, and, at the same time, contributes to the psychological wellbeing of those who do it.



The ICS is working on selective waste disposal

The environmental management system guarantees, among other things, the minimisation of environmental impacts through the correct management of waste, both strictly healthcare-related waste and domestic-type waste. In this sphere and during the year 2013, at those centres with ISO 14001 and EMAS certification, the waste collected selectively totalled 79 tonnes of paper waste and 15.4 tonnes of light packaging.



► Corporate social responsibility

A statement is published containing the rights and permits envisaged by law for workers who are victims of gender-based violence

Coinciding with the International Day for the Elimination of Violence against Women, the ICS published a statement on how the organisation protects and offers support to workers who are victims of gender-based violence. This instruction, which regulates the granting of rights and permits envisaged in current legislation for people who are victims of gender-based violence and who provide services at the ICS, are based on Catalan and Spanish regulations relating to the issue and clarifies the rights of those workers, regardless of their contractual status, who find themselves in a situation of this kind.

The document draws together the conditions, requirements and procedures that a woman suffering gender-based violence should follow in work-related issues. Along the same lines, it places at victims' disposal a direct and rapid circuit as well as different routes for communicating their situation to the company, since they can approach their direct superior, the human resources unit in their territory, or alternatively the ICS equality agent. Via this route, during the year 2014 some 28 women who reported suffering physical or psychological abuse from their partners received assistance.

Among the options that the ICS offers to tackle a situation of this kind are the possibility of reducing or reorganising working hours, geographical mobility or a change of centre, paid leave (in the case of statutory personnel or public servants) or justified work absences.

The statement also stresses the confidentiality guaranteed by the organisation throughout the process and summarises which are the documents that accredit the situation and how to carry out the processing of permits.

SOS Children's Villages Catalonia awards the ICS a prize for its commitment to programmes to help the most vulnerable children

All the centres of the ICS have been awarded a prize for their help in the dissemination of aid programmes for the most vulnerable children by SOS Children's Villages Catalonia. For years, the organisation's primary healthcare centres and hospitals have welcomed volunteer workers from SOS Children's Villages who inform users on the charity's projects to help families at risk of exclusion.

The awarding of the prizes took place during the Solidarity with Children event that was held to coincide with the 25th anniversary of the UN Convention on the Rights of the Child. During the event, held at Barcelona City Hall, the heads of management and communication of the territorial departments received a commemorative plaque.

SOS Children's Villages is an international non-profit organisation providing aid for children, founded in 1949 in Austria and now present in

134 countries. Its work focuses on the development of children until they become self-sufficient people who are properly integrated into society.

Different activities promote health among the ICS's workers

With the aim of becoming a reference point in the healthcare sector as a healthy company that promotes and protects the health, safety and wellbeing of its employees and the sustainability of the working environment in a continuous way, the ICS Prevention Service has set up a corporate line of work promoting health and aimed at all of its staff.

Within this context, it created the blog **ICSaludable** with the aim of promoting healthy lifestyles among workers, offering advice in line with the peculiarities of the healthcare sector, and sharing experiences undertaken throughout the territory.

As regards the Corporate Centre, various actions have been undertaken with the aim of combating sedentary lifestyles: monthly health tips sent by email to workers, sessions to teach simple stretching exercises that may be carried out during the working day and, coinciding with the World Day for Safety and Health at Work, different activities with the aim of helping ICS staff to improve their quality of life, by promoting changes in their postural habits, the practice of physical exercise and a healthy diet. Among these activities are practical cookery workshops, oriental techniques for physical, mental and emotional wellbeing, and physical exercise with the participation of the Alicia Foundation and the Catalan Sports Council.

Germans Trias is a pioneering hospital in the management of unconsumed meals

In 2010, Germans Trias Hospital began a study project on hospital meals that are left uneaten, with the aim of reducing expenses and food waste. Catering company ARCASA, a Hospital nutritionist, the Nursing Management and the Catering Unit made up a team that worked to analyse the different reasons for which meals exist that are not consumed, such as food that patients do not like, errors in the diet programming, insufficient training of nursing staff for establishing dietary guidelines or poor information in the different circuits: patients who have already been discharged, tests or surgical interventions that require prior fasting and, the most common of all, the transfer of patients to another floor or unit.

The ICSaludable blog is one of the new resources implemented to promote healthy lifestyles.



The Minimisation of Uneaten Hospital Meals project was awarded the 6th European Week for Waste Reduction Prize.

The aim is to help needy people, raising awareness and rallying the users, families and staff of the healthcare centres.

Thus, solutions have been applied to these incidents such as, for example, offering patients the possibility of choosing their diet whenever possible, or improving the training of nursing staff for the production of dietary guidelines. The case that generates the largest number of unconsumed meals, the need to intervene in the information circuits, has been resolved with the integration of various computer programs: the diet production program and the Gacela nursing care program.

This application has made it possible to directly avoid the wastage of 300 unconsumed meals per month. In 2013, a total of 2,204 meals were left uneaten (0.88% of the total) equivalent to over 1,400 kilos of food, but in 2014, this number was reduced to 804 meals (0.4%), around half a tonne of food. In one year, the reduction totalled nearly one tonne, which has led to a saving of 52,000 euros per year, while the generation of waste was reduced by over 50%.

The project for the Minimisation of Uneaten Hospital Meals, recognised as a good practice by the Catalan Government's Waste Agency, was also distinguished with the 6th European Prize for Waste Prevention in its category.

The ICS increases the number of centres with EMAS certification

The environmental management system of ICS primary healthcare, certified to ISO 14001 standard and verified according to the European regulations of the Environmental Management and Audit Scheme (EMAS), continues to expand to new primary healthcare centres. During the year 2014, the CAPs Montnegre and Trinitat Vella in Barcelona, La Granja in Molins de Rei, Mas Font in Viladecans, Martorell and Sant Sadurní d'Anoia were added. With these, the number of centres certified is now 51, representing 15.5% of the total.

The EMAS is an environmental management certificate available to any qualifying organisation in the European Economic Area and other countries. It is a tool for voluntary use by those organisations, public and private alike, that wish to assume their environmental and economic responsibility. The aim of the ICS is to consolidate the system and achieve certification of the majority of the institution's CAPs during the coming years.

ICS centres join in charity food donation campaigns




Vall d'Hebron Hospital and Joan XXIII Hospital in Tarragona organised a charity event to collect food donations to collaborate with the summer campaign "Hunger doesn't go on holiday" of the Food Bank Foundation. Twenty-five primary healthcare teams in Barcelona Ciutat also took part in the initiative.

Over the course of the third week in June, tables were set up at the centres to collect donations of food with high nutritional values that are staples in people's diet, such as rice, pasta, dried legumes, oil and milk, which contributed to cover the needs of the Food Bank during the summer period. A total of 4,700 kg of food was distributed among poor people.


At the end of the year, the Germans Trias and Josep Trueta hospitals, along with all the primary healthcare teams in the Girona area, took part in the Big Collection, another Food Bank initiative, and obtained almost four tonnes of food.

► The ICS Online

January

-  The **Costa de Ponent and Lleida teaching units** start the year disseminating their work in training resident doctors and nurses.
-  A new year and a new blog for the **EAP Sant Quirze de Besora** and the **health community of Lleida**.
-  **Catalunya Central** inaugurates the year on the **ICS YouTube channel** with **4** videos.

February

-  The **ICSaludable** blog arrives for health promotion among ICS staff.



-  In Barcelona, a new blog from **CAP El Carmel**.



March

-  The first Facebook of the year belongs to **EAP Ponts**.
-  Spring arrives and with it the first Twitter accounts:



arnau de vilanova hospital

@harnaulleida and **@PreventivaBellv**.

bellvitge hospital medicina preventiva

-  New blogs from **EAP Esparreguera** and from **Cap Turó**.
-  The blog "**30 años, 30 voces y más**" (30 years, 30 voices and more) publishes the story of **CAP Balàfia-Secà-Pardinyes** in Lleida, which turns out to be the most viewed entry in all of 2014.

April

-  April is the month of primary healthcare in Lleida with the Facebook page of **EAP Agramunt** and the blog of **CAP Tàrraga**.
-  The **ASSIR of Barcelona Ciutat** also catches the bug and starts up a blog.



May

-  With **16** re-tweets, **Linguistic Thursdays** are becoming well established!

Ibuprofèn, omeprazole, amoxicil·lina... s'escriuen així? Sortiu de dubtes!
Lèxic de fàrmacs
#catalàcorrecte @Termcat
<http://t.co/Kp2RoGN4S7>



 Seguir


June

-  Bellvitge Hospital starts up the new **Aula ELA** (ALS Classroom) blog.



-  Inauguration of the ICS Flick'r account in **Metropolitana Nord**.

July

-  Blogs proliferate over the summer: **CAP Sant Rafael** and **EAP Guinardó**, in Barcelona; **EAP Besalú** of the ICS in Girona; and **InfoICS**, for staying updated on the institution's current news.

-  **@apicstarte** reaches **500** followers!

-  The playlist of **ICS Lleida** is released on the **ICS YouTube channel** with **25** videos.

September


-  With **33** retweets, the top tweet of 2014!

If you go to the Big V with children, ensure they are carrying a visible card with their details and a contact number in case they get lost
#Diada2014



 Seguir

October

-  **EAP La Pobla de Segur**, the first on Facebook in Alt Pirineu i Aran.
-  Blogs are started by **Vall d'Hebron Clinical Pharmacology Service**, the **Primary Healthcare Patient Care Ethics Committee** and **Germans Trias Haemodynamics**.
-  Interviews with staff members who have peculiar pastimes begin on the **30 Years** blog.
-  With **#icsmemo2013** the contents of the ICS annual activity report are disseminated.

eap la pobla de segur



August




-  **EAP Santa Coloma de Farners** starts up a new blog for the holidays.



November

-  The **EAP Navàs-Balsareny** opens a Twitter account: **@eapnavasbalsa**
-  On 23 November, **@icscat** reaches **10,000** followers!!
-  **CAP Adrià** and **CAP El Morell** are the last to start new blogs in 2014.

December

-  Bellvitge Hospital ends the year by joining Twitter! With **@hbellvitge**, the ICS now has **6** hospitals on this platform.
-  The **InfoICS** closes 2014 with **260** published news items.
-  The **ECAP Blog** is consolidated as the most successful of 2014, with a total of **64,178** views.



The ICS consolidates a digital reputation of prestige

Year after year, the ICS reaffirms its **presence on the social media networks**. With a total of 56 blogs, 39 Twitter profiles and 17 Facebook pages, the institution is one of the public companies of Catalonia most intensely committed to forming part of these communication environments in an ordered, coherent way under a common corporate strategy.

Between them, the 56 blogs have totalled 787,950 visits and 5,068 postings with health tips, information on service and activities at the centres, among other contents. The 39 Twitter profiles have had more than 38,000 followers, of which 10,800 have a corporate profile. On the 17 Facebook pages, the total number of friends has exceeded 9,000, with a third following the corporate page. The three YouTube channels (ICS, Bellvitge Hospital and Metropolitana Nord) have counted over 133,000 views of the 522 videos that they offer.

Thanks to these fast, direct communication channels that are close to the community and to staff, the ICS offers reliable healthcare information and echoes interesting initiatives in the sphere of health, innovation, research, teaching, and information and communication technologies. Through these networks it also finds out the interests of users, strengthens shared knowledge between staff and facilitates the participation and involvement of the local community in the activities and campaigns that it promotes.

In this context, the organisation facilitates to those centres and territories that request it the opening of accounts and institutional profiles on the social networks with the greatest online presence (Twitter, Facebook, WordPress and YouTube) and gives support to the staff who administrate them for their management, the configuration of the corporate image and the production of innovative and interesting contents.



The institution's latest news items are shown on the InfoICS



The ICS, within its communication strategy of maximum dissemination of the institution's news, set up in July 2014 a new blog for news, the **InfoICS**, a tool for showcasing to staff and the community all of the ICS's activity and that of its centres and services in a single space online.

In little more than six months of life, InfoICS published 260 postings and totalled 22,505 visits, with 800 of them corresponding to the news piece about the **accreditation of hospitals** published on 29 September. The other most viewed news pieces were **"90% of ICS staff who apply for professional upgrading achieve it"**, published on 15 December, with 458 visits, and the **Call for the 1st Prize for the Best Innovative Experience of the ICS**, of 17 November, with 447 visits. The InfoICS receives visits mainly from Catalonia and the rest of Spain, followed by the United States and the United Kingdom.

The blog for the 30th anniversary of the ICS becomes a permanent blog on the institution's history

In early 2013, the ICS started a blog to explain the institution's history through its staff. The blog, titled "30 years, 30 voices", collected during the year accounts from 30 staff members who had been working at centres managed by the ICS for 30 years or more, in addition to articles written by the staff themselves, important events for the centres and significant news that has had a direct impact on the organisation.

Owing to the initiative's success, the ICS decided to continue publishing contents on the blog, which it re-named as "**30 years, 30 voices... and more**". The topics have been expanded with the inclusion of anecdotes and information related with the institution's past and the present, and also with the experiences of staff, both in the work and the personal sphere, reflected through interviews on peculiar pastimes. Also fundamental was the involvement of the territories with the writing up of notes that they themselves had prepared.

During 2014, "30 years, 30 voices and more" accumulated over 70,000 visits. The dissemination of the contents published on the blog was carried out through sharing on the social media networks and through the corporate intranets.

Online appointment-booking at CAPs continues to be the main procedure on the ICS website

The **online booking of appointments** for family medicine, paediatrics, nursing, dentistry, and social work services continues to be the procedure most used by users visiting the ICS website, as shown by the increase of 10.9% in appointments programmed via this channel.

The other most-used procedures continue to be the jobs bank, choosing and changing physician, and the consultation of job transfer announcements.

Moreover, among the most visited pages, notable is the access to the Virtual Campus for staff, which grew from 90,000 in 2013 to 169,000 in 2014. The most downloaded document was ***Calls or voluntary mobility: calendar 2014-2015***.

The ICS in Girona unveils its new website with information on the Trueta and primary healthcare

Coinciding with Sant Jordi's day, the new website www.icsgirona.cat went live online. In addition to viewing information on the institution in the territory, users can find all the details of the primary healthcare teams and the Trueta Hospital. The website was conceived from the perspective of citizens, with the aim of providing them with all the information that they may need at any time on healthcare, teaching or research. Thanks to the new website, the visibility and dissemination of the work carried out by the ICS in Girona has improved, as shown by the site's 8,898 visitors in 2014, in contrast with 2,727 in 2013.

The IDIBGi also offered its new **website** in 2014, with more information, an updated design, and the desire to be more operational and disseminate the activity of researchers.



Provider organisations that use Argos-SAP Patient Care

- 8 ICS hospitals
- Pere Virgili Healthcare Park
- Santa Maria Hospital in Lleida
- Pallars Comarcal Hospital
- Sant Foundation Hospital in La Seu d'Urgell
- Santa Caterina Hospital in Salt
- Cerdanya Hospital
- Catalan Institute of Oncology
- Diagnostic Imaging Institute
- Blood and Tissues Bank

Provider organisations that use ECAP

- EAPs of the ICS
- Health and Social Consortium of Catalonia
- Consortium of People Services of Vilanova i la Geltrú
- Castelldefels Health Agents Consortium (CASAP)
- Albera Health
- Empordà Health Foundation
- Healthcare Services Management
- Paediatrics line of the Consortium for Primary Healthcare of the Eixample
- Healthcare Consortium of the Anoia
- Institute of Healthcare Assistance
- Sant Jaume d'Olot Hospital - Private Foundation
- Althaia Foundation
- Maresme Healthcare Consortium
- Comprehensive Healthcare Consortium
- EAP Dreta de l'Eixample SLP
- Muralles Salut SLP
- Parc Taulí Healthcare Corporation

► Information systems

Santa Caterina Hospital and Cerdanya Hospital implement the Argos-SAP Healthcare work platform

Santa Caterina Hospital in Salt, managed by the IAS Institut d'Assistència Sanitària, and Cerdanya Hospital were the last two public network health centres to incorporate Argos, the clinical work station used by all ICS hospitals and based on SAP technology.

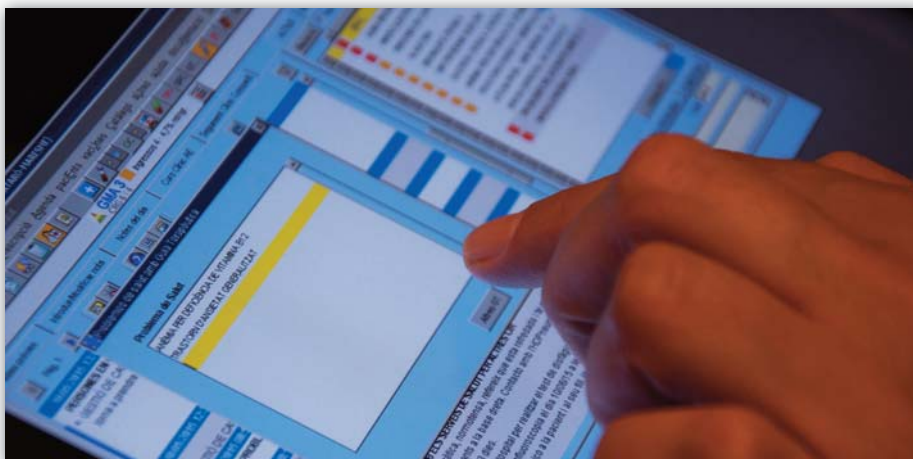
The extension of Argos-SAP beyond the hospitals of the ICS allows the sharing of clinical information, methodologies, tools and resources; favours efficient collaboration between healthcare providers and facilities; improves care quality and safety; facilitates an integrated view of the patient, and guarantees alignment with the Catalan Ministry of Health's patient care, management and technological directives.

Among the most significant improvement actions undertaken during 2014 within the context of the Argos Project, highlights were the implementation of the radiology clinical workstation in Girona; the introduction of the electronic request for blood at the IAS, at the ICO L'Hospitalet and at Viladecans Hospital; the implementation of a new department of anatomical pathology at the hospitals of Bellvitge, Vall d'Hebron and Lleida; the integration of the department of Pharmacy (Silicon) with SAP Healthcare for the creation of outpatient treatments, the rolling out of the assisted e-prescription in outpatient treatments and the deployment of the nursing workstation (Gacela) at all the ICS centres and the multi-purpose and specialised day hospitals (except those specialising in cancer).

Fifteen provider organizations of the public network now use ECAP at their primary healthcare centres

The primary healthcare clinical station (ECAP) is the computerized medical history program used by all healthcare professionals in the ICS's primary healthcare network. It is a tool that facilitates management of a patient's clinical data, offering a comprehensive view and support to clinical decision-making with a high level of safety and healthcare quality, and that provides information to staff on the results of their activity.

ECAP, which contains over six million medical histories, is integrated with Argos, with the Shared Medical History of Catalonia (HC3) and with the electronic prescription platforms. A total of 16 provider organizations of



the public network have now signed agreements with the ICS to introduce ECAP as a work platform at the primary healthcare centres that they manage.

Among the most significant actions undertaken in 2014, highlights include the introduction of ECAP at prison centres; the launch of new health programs (atrial fibrillation and fibromyalgia) within active clinical intelligence; the improvement of integration with the Vall d'Hebron laboratory; the improvement of integration with the medical history HC3, and the incorporation of services for programming appointments at the CAP, changing centre and doctor, and programming international health appointments via La Meva Salut.

The ICS promotes the exploitation of information to help in decision-making for staff and managers

With the aim of contributing support tools for taking both strategic and operational decisions, during the year 2014 the ICS took a very important step forward in the exploitation of the information to which it has access, from the generation, processing and presentation of data in Data Warehouse relational models, to their exploitation and analysis through models based on Business Intelligence technology. In this latter case, the option taken was the modular construction of a relational model for the notification and analysis of data.

It is important to highlight here the model of management and monitoring of patients included on the waiting list for surgery, which has enabled support to be given to its rationalisation. This meant that, by late 2014, 93.3% of patients had been waiting for less than six months for one of the procedures under guarantee. Other implemented and operational modules are the waiting list for diagnostic testing, the waiting list for first appointments, hospitalisation and case mix, that of emergencies and that of hospitalisation nursing care.

Start of the deployment of the new model for microcomputing services of the Catalan Government

In the year 2012, the Telecommunications and Information Technologies Centre (CTTI) of the Government of Catalonia started up the introduction of a new management model for information and communication technologies (ICT) in all public departments and bodies, including the ICS.

A part of the new ICT model affects microcomputing services (maintenance and renewal of computer equipment), the management of incidents and the maintenance of local networks. In order to assume these services, the CTTI has hired different companies from the sector through a public tender.

All of this process has led to a reordering in the providing of these services and, given the complexity and dimensions of the institution, during 2014 it has been applied in a progressive way to the ICS centres of Barcelona Ciutat, Metropolitana Nord, Metropolitana Sud, Catalunya Central and Girona. During 2015, it is planned to complete implementation in Camp de Tarragona, Terres de l'Ebre and Lleida.

The added-value activities that have a strategic dimension for the ICS, such as the development of computer programs and the exploitation of information, continue to be carried out by the same staff responsible for these at the institution.

New software allows users to conduct procedures independently without passing through the information desk

The application, developed by staff of the ICS Information Systems in Terres de l'Ebre and Girona in close collaboration with the rest of the territorial units, offers procedures such as admission at the centre, programming appointments at the CAP and printing an appointment note, a medication plan or a list of pending appointments. It also offers the possibility of searching for more information on the healthcare facility through the guide to the centre, the staff directory of maps of the facility. In addition, each centre can enter information of specific interest such as vaccination campaigns, health tips, notifications, etc., as well as carry out satisfaction surveys.

The new computer program, already installed at the healthcare centres of Terres de l'Ebre, Girona and Metropolitana Nord, which are equipped with tactile screens or terminals, represents a qualitative leap forward in care for users from the moment they arrive at the centre, given that they have all the information necessary regarding the facility and can carry out procedures quickly and independently without having to go to the information desk.

► Major Investments and Facilities

The ICS investment in building work and equipment totalled 15.6 million euros in 2014

The investment made by the ICS in 2014 in building work and equipment at its centres and services totalled 15,625,000 euros, in addition to the actions developed within the framework of the Catalan Health Service (CatSalut) and the Provincial Council of Lleida.

The most prominent investments, which have allowed an improvement in care quality and comfort for users of the ICS facilities, are the following:

Barcelona Ciutat

Primary Healthcare

- Continuation of building work on the new CAP La Mina in Sant Adrià de Besòs. Amount: 1,755,661 euros.

- Equipping of the new CAP Bordeta-Magòria in Barcelona. Amount: 348,881 euros.
- Equipping of the new CAP Casernes in Barcelona. Amount: 166,451 euros.

Vall d'Hebron University Hospital

- Equipping of the new surgery block at Vall d'Hebron Hospital (12 operating theatres and post-surgery recovery area). Amount: 4,129,616 euros.
- Remodelling works on the Short-Stay Unit in the General Area Emergencies Department. Amount: 439,000 euros.
- Remodelling works on the Neurological Observation Unit in the Traumatology Area. Amount: 69,000 euros.



Metropolitana Nord

Primary Healthcare

- Equipping of the new CAP Ronda Prim in Mataró. Amount: 536,207 euros.
- Equipping of the new CAP Llinars del Vallès. Amount: 180,599 euros.

Germans Trias i Pujol University Hospital

- Works and equipping of the new heart surgery operating theatre. Amount: 460,580 euros.
- Equipping of the Emergencies department at Germans Trias. Amount: 436,004 euros.
- Work to adapt the new operating theatre on the first floor. Amount: 265,949 euros.
- Start of the works on the new territorial clinical laboratory. Amount: 172,000 euros.

Metropolitana Sud

Primary Healthcare

- Continuation of the building work on the new CAP Vilafranca del Penedès. Amount: 6,244,573 euros.

- Continuation of the extension works on the CAP Dr. Pujol i Capsada in El Prat de Llobregat. Amount: 1,545,998 euros.
- Continuation of the building work on the new CAP Viladecans 3. Amount: 659,577 euros
- Continuation of the building work on the new Local Treatment Practice at Albinyana. Amount: 158,841 euros
- Equipping of the new CAP Santa Coloma de Cervelló. Amount: 106,759 euros

Bellvitge University Hospital

- Equipping of the new Emergencies Service. Amount: 2,035,689 euros.
- Works on the adaptation of the new data processing centre (CPD). Amount: 150,352 euros.

Catalunya Central

- Continuation of the building work on the new CAP Piera. Amount: 812,973 euros.
- Equipping of the new CAP Prats de Lluçanès. Amount: 129,494 euros.

Girona

Dr. Josep Trueta University Hospital in Girona

- Construction of the new cogeneration centre. Amount: 1,517,152 euros.
- Reform works on the air conditioning facilities of operating theatres 5 and 6. Amount: 205,950 euros.
- Works on repairing facades. Amount: 169,637 euros.



Lleida i Pirineu

Primary Healthcare

- Continuation of the building work on the new CAP Balaguer. Amount: 11,315,257 euros.
- Continuation of the building work on the new CAP 11 September in Lleida. Amount: 6,483,243 euros.
- Installation of a biomass boiler at CAP Seròs. Amount: 35,000 euros.

Arnau de Vilanova University Hospital in Lleida

- Building work and equipping of the new angiography room. Amount: 983,056 euros.
- Reform works on outpatient consultations, second floor. Amount: 480,332 euros.

Camp de Tarragona

Joan XXIII University Hospital in Tarragona

- Construction of the new cogeneration centre. Amount: 3,235,398 euros.
- Remodelling of the Outpatient Radiology Service. Amount: 154,136 euros.
- New tunnel for services and communication between the laboratory and the Hospital. Amount: 110,449 euros.

Terres de l'Ebre

Primary Healthcare

- Continuation of the building work on the new Local Treatment Practice at Campredó. Amount: 18,635 euros.
- Rehabilitation of the CAP Baix Ebre. Amount: 285,224 euros.

Verge de la Cinta Hospital in Tortosa

- Adaptation and improvement of the endoscopy procedure rooms of the Digestive and Respiratory Endoscopy services. Building works amount: 173,261 euros; equipment amount: 74,506 euros.
- Works on the adaptation and equipping of the Ophthalmological Surgery Unit (CMA). Amount: 50,000 euros.

Bellvitge Hospital launches a new Emergencies Service

The new Emergencies department of Bellvitge University Hospital, which was brought into service early in the morning of 1 November, covers a surface area of nearly 6,000 m² and triples the old service's surface area. This new facility has 64 care bays distributed into four modules, based on the triage model that classifies patients according to clinical urgency. The increase in surface area facilitates higher quality emergency care in aspects such as comfort, privacy and clinical safety for patients and their accompanying relatives or friends.

The new spaces for Emergencies have received an investment in equipment of around five million euros, with 1.5 million assigned to major radiodiagnosis apparatus.

Coinciding with the opening of this Service, the heliport that was previously located next to the healthcare site's car park has been transferred to roof of floor 5 of the new building. The transfer of patients with urgent critical conditions or originating from difficult-to-access areas by helicopter is a daily reality at the Hospital and the location of the heliport at the new facilities expedites the fast and safe admission of these people, mainly patients who are admitted to hospital after a heart attack code activation, a tertiary or polytraumatic stroke, originating from a catchment population of some two million inhabitants from the Metropolitana Sud and as far away as Terres de l'Ebre.



The Hospital's new Emergencies service also gives emergency specialised patient care to 210,000 inhabitants of the municipalities of El Prat de Llobregat and L'Hospitalet de Llobregat. The emergency patient care network in this area also has two primary healthcare emergency centres opened in the last two years: the CUAP El Prat and the CUAP Pura Fernández in L'Hospitalet.

The new Emergencies Service is the first facility to open at the new building constructed on the Bellvitge Hospital site, which has a total surface area of 45,000 m² and has represented an investment of 86 million euros for Cat-Salut. The opening of the new emergencies service as well as the rest of the facilities of this new building will represent the Hospital's consolidation as the main tertiary and high-complexity centre in its catchment area.



The new CAP Masquefa improves accessibility and the quality of healthcare for the residents in the municipality

In the month of April, the new Masquefa Primary Healthcare Centre (CAP) came into service. It belongs to the EAP Martorell Rural and gives service to a population of 8,199 inhabitants. The new CAP, built thanks to an agreement between CatSalut and Masquefa Town Council, offers services including family and community medicine, paediatrics, sexual and reproductive health care, dentistry (until now the residents of Masquefa had to travel to Martorell), healthcare education, nursing and user attention.

The facility covers a surface area of 1,091 m², distributed on a ground floor where the care services are located and an upper floor for services such as storage, changing rooms and administration. With this, the space for attending to patients from the municipality are practically doubled with respect to those that the local treatment room had, which means that the centre is now more comfortable and functional for patients and professionals.



Entry into service of the new CAP Santa Coloma de Cervelló

The new CAP entered into service in September and the services of the EAP Molí Nou are provided there. It serves a population of 7,831 inhabitants and improves the accessibility and quality of the healthcare services for the residents of Santa Coloma de Cervelló.

The new centre occupies a surface area of over 900 m² and attends to consultations in family medicine, paediatrics, nursing, home care, sexual and reproductive health care and attention to users.

The CAP Llinars del Vallès starts its healthcare activity

On 15 December, the new Primary Healthcare Centre (CAP) of Llinars del Vallès opened its doors. It is located at Carrer Joaquim Blume, 17. This centre represents an important improvement in care for the nearly 20,000 people in the Alt Mogent Basic Health area, whose referral catchment area includes Llinars del Vallès, Sant Antoni de Vilamajor, Sant Pere de Vilamajor and Vilalba Sasserra.

The primary healthcare team that works there is formed by family doctors, nursing staff, paediatricians, a dentist, nursing auxiliaries and administrative staff, as well as the midwife from the referral ASSIR for Alt Mogent.

The CAP Ronda Prim de Mataró enters into service

In November the CAP Ronda Prim de Mataró commenced its activity. The new centre is a multi-service facility that provides a comprehensive response in primary healthcare and sexual and reproductive health care. The investment totalled 7,401,541 euros.

This is the culmination of a reform process that began in the year 2011, when the EAP Ronda Prim and the ASSIR Mataró moved provisionally to a floor of the CAP El Maresme and to the CAP La Llàntia building, so that the old CAP Ronda Prim building (from the 1950s) could be demolished to build the new building that is now entering into service.

The building occupies one of the street blocks in the Eixample district of Mataró, its structure is U-shaped and adapts to the heights of the neighbouring buildings. The construction systems used in the building adapt to new technologies and take into account the maximum sustainability and energy savings.

The new CAP Ronda Prim has new facilities for staff and users, who will enjoy greater comfort and safety. Furthermore, the installation in a single space of different healthcare services enables optimisation of resources and improved collaboration between staff, which means a better service is offered to users. The new centre serves the users of CAP La Riera – which is closing due to serious deficiencies in the building - as well as the users of the old CAP Ronda Prim



The CAP Gran Sol in Badalona is fully up and running

On 1 December the CAP Gran Sol, situated at Carrer Doctor Bassols, 112-130, entered into full service. This is a strategic, innovative, referral city for Badalona that has enabled the reorganisation of primary healthcare in the La Salut and Llefià neighbourhoods, which now have three primary healthcare teams for a population of 65,453 inhabitants, which makes possible more efficient resources management and an improvement in accessibility.

The new facility's services include paediatric care, dentistry, mental health care and outpatient consultations with specialists at the Germans Trias Hospital in general surgery, digestive system and dermatology, which are added to the offer of family medicine and nursing that entered into service in July.

The Catalan Health Minister and the Mayor of Barcelona inaugurate the **CAP Bordeta-Magòria in Barcelona**

The new centre, located in the district of Sants Montjuic, was made possible thanks to an agreement between the Generalitat, the Barcelona Healthcare Consortium and Barcelona City Council. The facilities are a significant improvement on the old CAP, which dated from 1998 and was extended with a prefabricated modular building in 2006.

The centre is home to the EAP Bordeta-Magòria and has a total built surface of 3,231 m² to attend to over 32,000 people in its catchment area. The investment in the construction work and fitting out of the building totalled 5,027,747 euros.

The equipment that provides the primary healthcare services is constituted by family and community medicine physicians, paediatricians, and nursing and dental practitioners and social workers as well as user service staff. This team of professionals provides comprehensive healthcare services, with preventive and healthcare education activities, monitoring of chronically ill patients and home care programmes, within the framework of the public health system and, consequently, it is accessible and free of charge for all citizens.

Inaugurations of the **local local surgery at Paüls**, the new **rehabilitation facilities of the CAP Baix Ebre** and the **digestive and respiratory endoscopy services at Verge de la Cinta Hospital**

The new local surgery at Paüls gives healthcare cover to a population of 600 inhabitants. The facility is newly built and has a surface area of 183.97 m² distributed in an entrance area, two consulting rooms, medicine and nursing), waiting room, a services installation area and storage room. The cost of the building work and equipping the facility totalled 630,208.58 euros. The centre is located at Carrer de la Creu, 42 in Paüls, in an area of landscape excellence.

As regards the new facilities of the Rehabilitation Service of the CAP Baix Ebre, its accessibility from the street has improved, the gymnasium and work areas have been extended, individual bays have been created with new dressing rooms to improve the degree of respect for privacy and the comfort of patients, and the rehabilitation services have been integrated into a single area (which includes the speech therapy service and rehabil-



Joan XXIII Hospital renovates its Gynaecology and Obstetrics Ward with individual rooms

The Joan XXIII Hospital has invested 197,000 euros in the renovation and equipping with all services and furniture of a total of 450 m² of an entire wing on the fourth-floor Gynaecology and Obstetrics ward, with the aim of providing newborn babies and their families a space that favours bonding. This ward has been remodelled and has 11 new spacious and bright individual rooms, all with bath and shower, wardrobes and baby changing areas.

Inauguration of the new local surgery at Sant Joan de les Abadesses

The new Local Surgery at Sant Joan de les Abadesses comprises seven consultation rooms (two for general medicine, one for paediatrics, three for nursing and one multi-purpose), and one treatment room distributed across a surface area of 558 m². It also has areas for attending to the public and a healthcare education classroom, a meeting room and a break room. The works on this new practice have represented an investment of 1,322,000 euros and were funded by Cat-Salut.

The new facility will be open from Monday to Friday from 8 a.m. to 8 p.m., and outside of this timetable, users will be attended to at the continuing care facilities at the CAP Ripoll, open each day of the week from 8 a.m. to 8 p.m., and at Campdevàrol Hospital, open every day from 8 p.m. to 8 a.m.

itation consulting room). In the remodelling of the facility, which has taken two months, a total of 285,224.62 euros have been invested.

Finally, the facilities for the services of Digestive and Respiratory Endoscopy at the Verge de la Cinta Hospital in Tortosa, which occupy 395 m², represented a total investment of 555,549 euros. The new facilities mean an improvement, firstly, in the conducting of digestive endoscopy procedures, which have experienced a significant increase in the last two years with the screening of the population for colon and rectal cancer in the comarcal regions of Baix Ebre and El Montsià, and secondly, in respiratory endoscopy procedures. In the same action, the treatment rooms area has also been modernised with the creation of four new rooms and the patient circuits have been defined improving the level of respect for their privacy and their comfort. The new distribution avoids dead time and improves the care and resolution capacity.

The modernisation of the facilities has also led to the installing of a medicinal gases network that includes CO₂ (which reduces side effects after the tests).

The IDIBGI reforms the Mancomunitat building at the Martí i Julià Hospital Park to consolidate biomedical and health research in Girona

The Biomedical Research Institute in Girona presented the new project for the reform of the **Mancomunitat 2**, building situated in the Martí i Julià Hospital Park in Salt, which includes the rehabilitation of a two-storey building spread over 1,700 m² that already existed and has been in disuse since 2009.

The ground floor of the main building will be entirely allocated to a laboratory, while in the annex building and floor 1 the work rooms and meeting rooms will be installed along with the researchers' offices and the research support areas. The rehabilitation aims to recover the original building respecting the most significant historical features of the construction. The facades will retain their current aspect and the existing wooden carpentry will be restored and adapted to the new use.

The project also includes the construction of an animal facility for small laboratory animals (rats and mice) in a prefabricated module independent of the existing building. This installation, the first in the Girona area, will facilitate certain basic and clinical research activities and allow a qualitative leap to be taken in the work of the IDIBGI researchers, who at present must resort to outside collaborations to conduct experiments with animal models.



► Organizational Chart



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enthusiasm

public service

responsibility

innovation

commitment

respect

integrity

trust

change

involvement

safety

competence

sustainability

fairness

sensitivity

cooperation



gencat.cat/ics