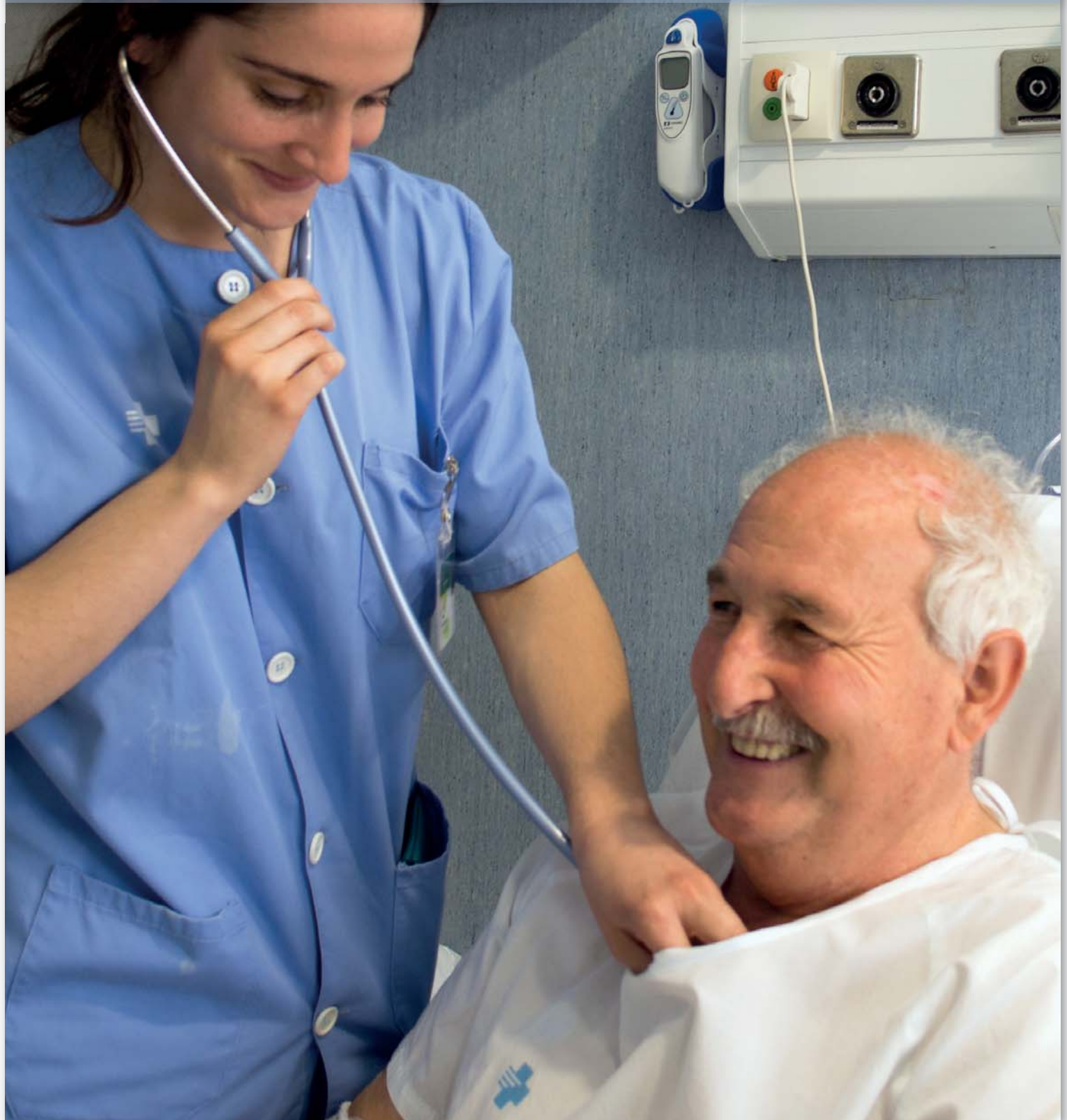


2013 Annual Report

Catalan Health Institute

 Generalitat de Catalunya
Departament de Salut

 Institut Català
de la Salut



► Introduction

We are pleased to present the activity report for the Catalan Health Institute (ICS) for 2013, a year in which, despite continuing immersed in a truly difficult economic context, the institution again met its targets for the programme contract set by CatSalut. It increased surgical activity by 3.68% with respect to the previous year, exceeding 103,000 interventions between the eight hospitals. This good performance was also reflected in an increase of 4.83% in surgical discharges and of 1.53% in the average proportion of high-complexity discharges.

During the year 2013, the ICS has also remained committed to the setting up of new non-face-to-face care models to facilitate accessibility for users to healthcare professionals and to services. Thus, apart from rolling out new telemedicine projects across the entire territory, the number of telematic visits taking place in primary healthcare increased dramatically. Furthermore, the main composite indicators of healthcare quality and pharmaceutical prescription, to which a new diagnostic quality standard was added this year, have achieved the best results since their implementation.

As for the most important strategic projects, mention should be made of the project to transform this institution which, under orders from the Parliament, has been reoriented with the aim of promoting the ICS's territorial integration with the rest of the public health network providers in order to facilitate healthcare coordination, continuity of access for the general public and fulfilment of the objectives of the Health Plan 2011-2015.

With the aim of preserving the ICS's leading role in the sector, this year progress was also made in developing a collaborative model of patient-centred healthcare, based on networking between the professionals from the different healthcare levels and the intensive use of information systems and clinical management tools.

Another strategic initiative that saw continuity was the integration of all the ICS's radiodiagnosis and nuclear medicine services in Tarragona, Terres de l'Ebre and Girona into the Diagnostic Imaging Institute. The process of territorial unification of the clinical laboratories also continued to advance towards making the integration of the three ICS laboratories in the city of Barcelona (Vall d'Hebron, Manso and Bon Pastor) a reality during the year 2014.

Other actions of a strategic nature that started to be developed are the comprehensive and integrational approach to patients with chronic illness, the improvement of urgent care circuits and the reduction in waiting lists, with specific emphasis on managing the length of patient waiting times. The generalization of aggregated purchasing processes and the review of the Order of public prices are also measures undertaken in recent months that are aimed at improving the organisation's efficiency and sustainability.

Thus, with the review of all the activity carried out during the year 2013, our aim is to render account to citizens, and at the same time, leave a record of the work carried out by thousands of highly qualified healthcare professionals who renew their commitment to the public healthcare system every day and work from all points in Catalonia to respond to the health needs of its residents, offering efficient, user-friendly and high-quality care.

Carles Constante Beitia
Chair of the Board

Pere Soley Bach
Managing Director



► Throughout Catalonia

With a workforce of 38,577 professionals, 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 Catalonia. It currently manages 288 primary healthcare teams and eight hospitals: Vall d'Hebron, Bellvitge, Germans Trias, Arnau de Vilanova in Lleida, Joan XXIII in Tarragona, Josep Trueta in Girona, Verge de la Cinta in Tortosa and Viladecans.

As the leading organisation within the public health system, the aim 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 carries out a great deal of scientific activity through seven research institutes integrated into its hospitals and primary healthcare centres. In the educational sphere, the ICS trains 2,400 specialists in 49 different health sciences specialities at its centres. It also accepts over 4,500 undergraduate students in medicine, nursing, dentistry and other programmes, while working intensively to provide continuous training for all its professional groups.

A day's activity at the ICS

Primary Healthcare

	77,252 family medicine appointments
	14,852 paediatric appointments
	49,746 nursing appointments
	4,266 dentistry appointments
	1,346 social work appointments
	5,969 continuing care appointments
	7,377 sexual and reproductive healthcare (ASSIR) appointments
	349 Home Care and Support Teams Programme (PADES) appointments

Hospital Care

	827 discharges
	417 major surgical interventions
	1,908 emergencies
	11,216 outpatient consultations
	988 day-hospital sessions

► Resources

Primary Healthcare

Structural Resources

- 329 primary healthcare centres
- 649 local treatment centres
- 21 emergency primary healthcare centres (CUAP), 3 of them under shared management
- 129 continuing care points (PAC)
- 20 isolated or mountain emergency treatment facilities
- 28 specialist healthcare centres
- 2 clinical laboratories

Healthcare Resources

- 288 primary healthcare teams, 4 of these under shared management
- 11 paediatrics lines/paediatric care teams, one of them under shared management
- 23 regional continuing and emergency healthcare units (ACUT)
- 24 sexual and reproductive healthcare services (ASSIR)
- 26 diagnostic imaging services, of which 13 are managed by the Diagnostic Imaging Institute
- 11 Homecare 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
- 142 operating theatres
- 21 recovery room units with 160 care points
- 6 major outpatient surgery (CMA) units
- 24 delivery rooms
- 1,330 outpatient consulting rooms (including treatment rooms)
- 384 day-hospital care points
- 405 emergency bays with 688 care points (PAC)
- 8 clinical laboratories
- 212 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Oncology Institute (ICO)
- 3,594 available beds:
 - 3,015 conventional beds
 - 464 critical and semi-critical beds
 - 115 special care cots
- 3 international health units with 4 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 and emergency healthcare unit (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)

Barcelona

Primary Healthcare

Structural Resources

- 42 primary healthcare centres
- 4 emergency primary healthcare centres (CUAP)
- 2 continuing care points (PAC)
- 9 specialty healthcare centres

Healthcare Resources

- 53 primary healthcare teams, 3 of them under shared management with the Hospital Clínic
- 8 paediatric lines
- 2 regional continuing and emergency healthcare units (ACUT)
- 4 sexual and reproductive healthcare services (ASSIR)
- 6 diagnostic imaging services, managed by the Diagnostic Imaging Institute (IDI)
- 1 Homecare and Support Teams Programme (PADES) unit
- 2 rehabilitation units

Vall d'Hebron University Hospital

- 45 operating theatres
- 4 recovery room units with 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 215 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 emergency primary healthcare centres (CUAP)
- 11 continuing care points (PAC)
- 1 specialty healthcare centres

Healthcare Resources

- 20 primary healthcare teams
- 2 regional continuing and emergency healthcare units (ACUT)
- 2 sexual and reproductive healthcare services (ASSIR)
- 4 diagnostic imaging services, managed by the Diagnostic Imaging Institute (IDI)
- 3 rehabilitation units
- 1 occupational health units

Joan XXIII University Hospital of Tarragona

- 14 operating theatres
- 3 recovery room units with 15 care points
- 1 major outpatient surgery (CMA) unit
- 2 delivery rooms
- 93 outpatient consulting rooms (including treatment rooms)
- 16 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)
- 310 available beds:
 - 256 conventional beds
 - 35 critical and semi-critical beds
 - 19 special care cots

Catalunya Central

Structural Resources

- 39 primary healthcare centres
- 112 local treatment centres
- 3 primary healthcare emergency centres (CUAP), two of which are under shared management with the Anoia Healthcare Consortium and the Osona Integrated Health Service
- 22 continuing care points (PAC)
- 6 isolated or mountain emergency treatment facilities
- specialty healthcare centres

Healthcare Resources

- 32 primary healthcare teams
- 3 regional continuing and emergency healthcare units (ACUT)
- 4 sexual and reproductive healthcare services (ASSIR)
- 3 diagnostic imaging services
- 1 Homecare and Support Teams Programme (PADES) unit

Girona

Primary Healthcare

Structural Resources

- 34 primary healthcare centres
- 115 local treatment centres
- 1 emergency primary healthcare centres (CUAP)
- 22 continuing care points (PAC)
- 1 specialty healthcare centre

Healthcare Resources

- 26 primary healthcare teams
- 1 regional paediatrics care team under shared management with the Fundació Hospital Sant Jaume of Olot
- 4 regional continuing and emergency healthcare units (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)
- 1 Homecare and Support Teams 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
- 57 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Oncology Institute (ICO)
- 367 available beds:
 - 296 conventional beds
 - 53 critical and semi-critical beds
 - 18 special care cots

Metropolitana Nord

Primary Healthcare

Structural Resources

- 83 primary healthcare centres
- 23 local treatment centres
- 2 emergency primary healthcare centres (CUAP)
- 23 continuing care points (PAC)
- 7 specialty healthcare centres
- 1 clinical laboratory

Healthcare Resources

- 64 primary healthcare teams
- 5 regional continuing and emergency healthcare units (ACUT)
- 7 sexual and reproductive healthcare services (ASSIR)
- 8 diagnostic imaging services
- 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

- 20 operating theatres
- 1 recovery room unit with 10 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

Lleida

Primary Healthcare

Structural Resources

- 23 primary healthcare centres
- 163 local treatment centres
- 1 emergency primary healthcare centre (CUAP)
- 12 continuing care points (PAC)
- 4 isolated or mountain emergency treatment facilities
- 1 specialty healthcare centre

Healthcare Resources

- 21 primary healthcare teams
- 2 regional continuing and emergency healthcare units (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)
- 1 international health unit

Arnau de Vilanova University Hospital of Lleida

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

Metropolitana Sud

Primary Healthcare

Structural Resources

- 59 primary healthcare centres
- 47 local treatment centres
- 4 primary healthcare emergency centres (CUAP), 1 under shared management with Castelldefels Town Council
- 21 continuing care points (PAC)
- 4 specialty healthcare centres
- 1 clinical laboratory

Healthcare Resources

- 54 primary healthcare teams, 1 of them under shared management with Castelldefels Town Council
- 2 regional paediatrics care teams
- 3 regional continuing and emergency healthcare units (ACUT)
- 3 sexual and reproductive healthcare services (ASSIR)
- 2 diagnostic imaging services
- 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
- 56 emergency bays with 89 care points
- 1 clinical laboratory
- 45 high-technology equipment items, including those managed by the Diagnostic Imaging Institute (IDI) and by the Catalan Oncology Institute (ICO)
- 649 available beds:
 - 532 conventional beds
 - 117 critical and semi-critical beds
- 1 international health unit

Hospital of Viladecans

- 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
- 85 conventional beds available

Terres de l'Ebre

Primary Healthcare

Structural Resources

- 21 primary healthcare centres
- 48 local treatment centres
- 1 emergency primary healthcare centre (CUAP)
- 14 continuing care points (PAC)
- 1 specialty healthcare centre

Healthcare Resources

- 11 primary healthcare teams
- 1 regional continuing and emergency healthcare unit (ACUT)
- 1 sexual and reproductive healthcare service (ASSIR)
- 1 diagnostic imaging service, managed by the Diagnostic Imaging Institute (IDI)
- 1 rehabilitation unit

Verge de la Cinta Hospital of 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)
- 177 available beds:
 - 166 conventional beds
 - 6 critical and semi-critical beds
 - 5 special care cots
- 1 international health unit



► Healthcare Activity

Stratification of the assigned population treated by the ICS's primary healthcare teams during the year 2013

Clinical Risk Groups (CRG) are a morbidity grouping system that allows patients to be classified in homogeneous morbidity groups according to basic information such as age, sex and health problems.

CRGs constitute a tool that enables classification of patients into single, mutually exclusive morbidity categories, based on morbidity patterns. And even when comorbidity is fixed, the CRGs determine the different levels of severity.

Therefore, CRGs are more specific and elucidatory than traditional categories of age and gender for the purposes of trying to explain the variations in the morbidity burden or consumption of resources (ap-

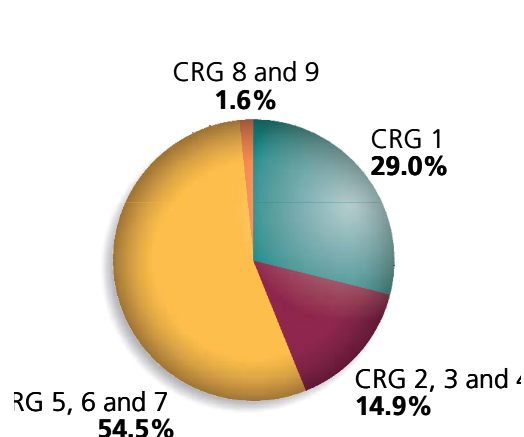
pointments or pharmaceutical expenditure) between two or more patient populations.

It is important to highlight that groups 5, 6 and 7, which correspond to patients with chronic illness, represent 54.5% of the assigned population attended to by ICS primary healthcare during the year 2013. These patient groups generate 88.7% of the expenditure in pharmacy and, in general, are those that use healthcare resources to the greatest extent. Therefore, in accordance with the Health Plan of Catalonia 2011-2015, ICS primary healthcare has paid special attention to the monitoring of these patients.

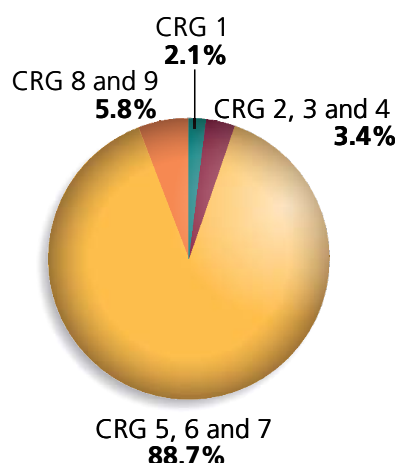
CRG	Assigned population attended to ¹		Pharmaceutical expenditure		Pharmaceutical expenditure (euros per person)	Patients with two or more emergency admissions	
CRG 1. Healthy	1,217,429	29.0%	17,191,304	2.1%	14.12	2,487	8.3%
CRG 2. Acute illness	64,734	1.5%	2,975,447	0.4%	45.96	483	1.6%
CRG 3. Minor chronic illness	413,447	9.8%	14,655,034	1.8%	35.45	689	2.3%
CRG 4. Various minor chronic illnesses	148,829	3.5%	11,032,255	1.3%	74.13	260	0.9%
CRG 5. Dominant chronic illness	949,619	22.6%	114,426,299	13.7%	120.50	3,178	10.6%
CRG 6. Two dominant chronic illnesses	1,276,895	30.4%	553,626,370	66.1%	433.57	15,754	52.5%
CRG 7. Three dominant chronic illnesses	61,664	1.5%	74,991,873	9.0%	1,216.14	4,083	13.6%
CRG 8. Neoplasms	41,515	1.0%	29,844,167	3.6%	718.88	2,100	7.0%
CRG 9. Catastrophic illnesses	23,798	0.6%	18,461,731	2.2%	775.77	981	3.3%
Total	4,197,930	100.0%	837,204,479	100.0%		30,015	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, paediatrics, or nursing services.

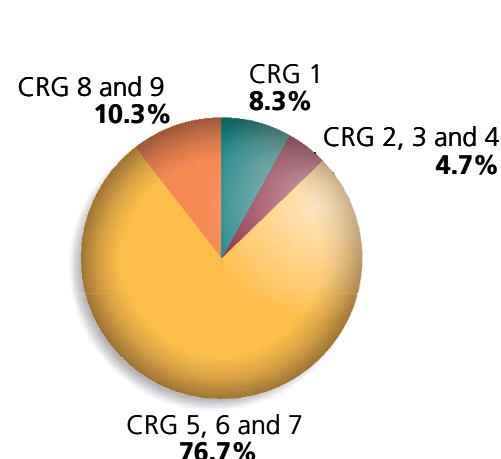
Assigned population attended to



Pharmaceutical expenditure



Patients with two or more emergency admissions



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 with more than one chronic illness existing 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 diabetes, hypertension, chronic obstructive pulmonary disease, asthma, or heart failure. In this population, it is more frequent for two chronic illnesses to be suffered simultaneously, than one alone.

Source: ECAP.

Primary Healthcare Activity

		% variation Total 2013/2012	
EAP appointments		36,423,430	1.1
Family medicine		19,081,363	0.4
Face-to-face appointments	At the centre	16.11,507	-2.7
	Home visit	355,188	5.3
Non face-to-face appointments	Telephone	1,780,672	-1.6
	Telematic	829,996	191.5
Paediatrics		3,668,456	1.0
Face-to-face appointments	At the centre	3,464,467	0.1
	Home visit	1,633	-17.6
Non face-to-face appointments	Telephone	172,750	9.3
	Telematic	29,606	164.3
Nursing		12,287,330	1.8
Face-to-face appointments	At the centre	10,515,049	-0.2
	Home visit	768,085	4.7
Non face-to-face appointments	Telephone	850,076	14.4
	Telematic	154,120	180.0
Dentistry		1,053,776	4.1
Face-to-face appointments	At the centre	1,030,505	3.9
	Home visit		
Non face-to-face appointments	Telephone	20,430	4.2
	Telematic	2,841	378.3
Social work		332,505	8.4
Face-to-face appointments	At the centre	177,692	-1.8
	Home visit	23,056	14.2
Non face-to-face appointments	Telephone	129,141	24.3
	Telematic	2,616	46.6

		% variation Total 2013/2012	
Continuing and emergency care appointments		2,178,612	-1.8
Face-to-face appointments	At the centre	1,991,222	-1.7
	Home visit	120,919	-0.1
Non face-to-face appointments	Telephone	66,471	-7.5
	Telematic		
ASSIR appointments		1,822,008	6.1
Face-to-face appointments	At the centre	1,691,980	4.3
	Home visit	9,738	-11.6
Non face-to-face appointments	Telephone	82,889	9.8
	Telematic	39,172	3.8
PADES appointments		86,124	5.1
Face-to-face appointments	At the centre	34,520	2.0
	Home visit	26,893	13.2
Non face-to-face appointments	Telephone	24,711	1.4
	Telematic		
Mental health appointments		10,670	-2.1
First appointments		1,753	-31.7
Successive appointments		8,917	7.1
International health¹			
Patients attended		10,253	
Appointments for travellers		9,917	
Appointments for imported diseases		336	
Vaccinations		20,086	

Source: SIAP and PROSICS.

1. In the year 2013, integration took place of the Drassanes and Vall d'Hebron international health units, therefore it is not possible to offer a variation percentage of activity with respect to 2012.

Composite 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 by its primary healthcare teams. During the year 2013, the main clinical indicators integrated into the EQA were improved with respect to 2012, reaching the best results since their implementation in the year 2007. In terms of number of cases with a successful outcome, these results represent an increase in the number of patients better treated or

controlled, an increase that, compared with the data from the year 2012, reaches, for example, over 9% in the case of patients with ischemic cerebro-vascular disease with correct control of LDL-cholesterol or in the case of patients with complete arrhythmia due to atrial fibrillation (A-Fib) with tailored anti-platelet or anticoagulant treatment, or over 14% in that of patients with heart failure adequately treated with a beta-blocker, as presented in the following table.

	Cases treated successfully	% of the total of cases	% variation 2013/2012
Control of chronic conditions			
Control of blood pressure in patients with arterial hypertension	664,236	69.68	4.11
Control of blood pressure in patients with disease posing cardiovascular risk	324,274	62.12	6.36
Type 2 DM < age 80 with acceptable control of HbA1C	178,899	66.14	4.89
Screening for diabetic foot in patients with DM type 2	221,347	64.87	2.02
Screening for diabetic retinopathy in patients with DM type 2	202,543	74.88	3.03
Stroke with antiplatelet therapy	80,576	95.13	4.31
Stroke with acceptable control of LDL	47,026	55.52	9.67
Ischemic heart disease with beta-blocker therapy	79,874	69.48	4.52
Ischemic heart disease with antiplatelet therapy	109,878	95.58	0.94
Ischemic heart disease with acceptable control of LDL	71,678	62.35	4.94
Atrial fibrillation / cardiac arrhythmia with adjusted antiplatelet / anticoagulant therapy	74,657	85.97	9.82
Heart failure with treatment with ACE inhibitor / angiotensin II receptor antagonist	42,818	77.55	7.63
Heart failure with beta-blocker therapy	33,154	60.05	14.41
Comprehensive assessment of homecare (ATDOM) patients	46,034	92.38	10.84
Assessment of ulcer risk in homecare (ATDOM) patients	47,476	95.28	8.59
Preventive activities			
Systemic vaccination in children	758,407	86.55	1.24
Influenza vaccination > age 59	618,376	47.87	3.39
Influenza vaccination, ages 15-59 with risk factors	63,748	20.57	0.37
Influenza vaccination < age 15 with risk factors	12,395	28.37	1.14
Tetanus vaccination in adults	2,775,708	58.45	3.97
Obesity screening between ages 6 and 14	384,287	73.74	4.77
Screening for harmful habits in teens	37,186	70.50	12.91
Screening for alcohol consumption (ages 15-79)	1,784,592	40.33	-0.79
Non-smokers in population with risk pathologies	991,429	77.90	4.24
Quitting smoking in the previous 12 months	62,020	7.12	11.77

Source: SISAP.

Pharmaceutical prescription quality standard

The pharmaceutical prescription quality standard (EQPF) is a measuring tool that the ICS has used since 2003 as part of the process of professional incentivisation for the improvement of quality of the prescription of medicines in the sphere of primary healthcare.

The set of indicators that compose it is defined as the pattern of use of medicines generated when the therapeutic option used is supported by the best scientific evidence available in tackling health problems typical of a healthcare level. These patterns are usually adjusted in accordance with the prevalence of prioritised health problems and the demographic characteristics of patients attended.

Over the course of the years, the different versions available of the EQPF have been subject to several validation procedures with data proceeding from clinical case histories and have shown their correlation with the clinical data recorded. They have also shown that their values are positively correlated with the healthcare results of the primary healthcare teams and negatively with the pharmaceutical expenditure that their activity generates.

It must be highlighted that, even though the tool has become more demanding with each new version, the score achieved in the EQPF has continued to improve year after year. Thus, in 2013 it was 76 points, as compared with 69 points in 2012 and 60 points in 2011.

Indicators	Minimum target	Maximum target	EQPF Result	Achievement
Monitoring of the recommendations of the Programme for Pharmacotherapeutic Harmonisation of Medicines in the sphere of primary and community healthcare (PHF-APC)	≤ 1,8	≤ 1,2	1.84	5
Use of antihypertensives				
% diuretics or associated recommended/total antihypertensives	≥ 26	≥ 30	27.16	1
% Angiotensin II Receptor Antagonists/ (ACE Inhibitors + Angiotensin II Receptor Antagonists)	≤ 43	≤ 32	38.90	2
% recommended antihypertensive drugs/total antihypertensives	≥ 62	≥ 68	66.17	4
Use of antiulcer drugs				
DiD* of the total of antiulcer drugs	≤ 112	≤ 100	108.27	4
% recommended PPI (protein pump inhibitor) drugs/total PPI drugs	≥ 88	≥ 91	90.88	4
Use of medications for musculoskeletal conditions				
DiD* of the total of NSAIDs (non-steroidal anti-inflammatory drugs)	≤ 35	≤ 30	31.53	2
% recommended NSAIDs/total NSAIDs	≥ 79	≥ 82	82.82	2
DiD* of the total of chondroprotective agents	≤ 6	≤ 4	4.68	2
Use of medicines for osteoporosis				
DiD* of the total of medicines for osteoporosis	≤ 17	≤ 14	11.26	6
% recommended drugs for osteoporosis /total drugs for osteoporosis	≥ 40	≥ 50	52.04	4
Use of antibiotics				
DiD* of the total of antibiotics	≤ 11	≤ 9	10.82	4
% penicillin/total antibiotics		≥ 60	62.14	1
% amoxicillin/amoxicillin + amoxicillin-clavulanic acid		≥ 50	50.53	1
% recommended drugs/total antibiotics	≥ 70	≥ 74	71.02	1
Use of antilipemics				
% recommended hypolipidemic drugs/total hypolipidemics	≥ 73	≥ 81	80.27	10
Use of drugs for respiratory conditions (asthma and COPD)				
% long-acting β2 associations + corticoids/total anti-asthmatics	≤ 30	≤ 25	26.32	2
% recommended anti-asthmatic drugs/total ant-asthmatics	≥ 66	≥ 72	67.92	4
Use of anti-depressants				
DiD* of the total of anti-depressants	-	-	66.19	-
% recommended anti-depressant drugs/total anti-depressants	≥ 57	≥ 64	62.42	5
Use of anxiolytics and hypnotics				
DiD* of the total of anxiolytics and hypnotics	≤ 74	≤ 63	69.60	4
% recommended anxiolytic and hypnotic drugs/total anxiolytics and hypnotics	≥ 85	≥ 87	88.63	4
Use of non-insulin anti-diabetic agents				
% recommended non-insulin anti-diabetic agents/total non-insulin anti-diabetic agents	≥ 79	≥ 85	80.51	4
Total achievement				76

* Defined daily dose/1,000 inhabitants adjusted by age sectors and working/pensioner.

Source: Unit of Medicine Coordination and Strategy and SISAP.

Diagnostic quality standard

As a complement to the EQA, in the year 2013 the ICS launched another composite indicator: the Diagnostic Quality Standard (EQD), a set of clinical indicators aimed at improving quality of the diagnostic record in the primary healthcare (ECAP) medical history.

The EQD analyses the diagnoses recorded by physicians in the medical history based on five aspects: correct use of the diagnostic register, correlation between treatments and diagnoses, adequacy of new diagnoses, correlation between established diagnostic criteria and diagnoses made, and diagnostic specificity of functional degree or severity of the illness.

Specifically, quality is measured in the diagnostic register of fifteen chronic health problems that are prevalent in primary healthcare: arterial hypertension, diabetes mellitus type 2, hypercholesterolemia, obesity, heart failure (HF), chronic kidney disease, chronic obstructive pulmonary disease (COPD), asthma, osteoporosis, urinary incontinence, faecal incontinence, anaemia, dementia, primary hypothyroidism, and migraine.

The EQD1 dimension includes a single indicator that considers the percentage of appointments that are linked to a diagnosis in the ECAP. The EQD2 includes five indicators that consider the correlation between the prescription of certain drugs unequivocally indicated for a health problem and the existence of this diagnosis in the ECAP. The EQD3 is formed by eleven indicators that, given new diagnoses discharged by the ECAP, check whether they comply with the diagnostic criteria for these health problems. The EQD4 includes four indicators that consider whether, before the existence of certain diagnostic criteria for a disease, the same should be discharged as a diagnosis. Finally, the EQD5 includes three indicators that show whether before a diagnosis of HF, COPD or asthma, its degree of severity is specified.

Over the course of 2013, an important improvement took place in all dimensions of the EQD, as reflected in the following table.

EQD	Result in January 2013	Result in December 2013	% variation January/December
EQD1. Correct use of the diagnostic register	58.38%	69.49%	19.02%
EQD2. Correlation between treatments and diagnoses	81.01%	85.45%	5.48%
EQD3. Accuracy of new diagnoses	51.19%	57.75%	12.82%
EQD4. Correlation between criteria and diagnoses	60.88%	69.73%	14.54%
EQD5. Diagnostic specificity	13.33%	27.02%	103.15%

Source: SISAP.



Hospital activity

	Total	% variation 2013/2012
Discharges¹	204,258	0.70
Medical discharges	98,061	-3.09
Surgical discharges	97,972	4.83
Standard discharges	62,689	2.42
Discharges after major outpatient surgery	35,283	9.40
Emergencies of more than 24 hours	8,225	0.42
Mean proportion of discharges (DRG complexity)	1.986	1.53
Average stay (Standard discharges) (days)	6.99	-1.33
Occupation rate (%)	91.03	-1.08
Mortality (%)	2.69	-7.97
Admissions	154,486	-0.34
Emergency admissions	99,979	-1.86
Scheduled admissions	54,507	2.59
Emergency readmissions in 30 days (%)	5.44	-2.72
Home hospitalization	5,144	6.77
Day-hospital sessions	243,930	13.13
Outpatient consultations²	2,770,288	2.87
First appointments	873,782	0.32
Successive appointments	1,896,506	4.09
Reiteration rate (%)	2.17	3.76
Major surgery	103,094	3.68
Scheduled standard surgical interventions	44,374	4.53
Emergency standard surgical interventions	18,755	-0.28
Major outpatient surgery interventions	39,965	4.68
Outpatient surgery rate ³ (%)	42.35	0.03
Major outpatient surgery substitution rate (%)	85.75	0.48
Minor outpatient surgery	87,257	13.62

	Total	% variation 2013/2012
Emergencies	696,571	-0.05
Level I Resuscitation (%)	0.2	
Level II Emergency (%)	4.8	
Level III Urgent (%)	30.0	
Level IV Less urgent (%)	41.6	
Level V Non-urgent (%)	10.9	
Without triage assigned (%)	12.5	
Emergencies with hospitalization	91,859	-3.39
Emergencies with hospitalization/total emergencies (%)	13.19	-3.34
Emergencies/day	1,908	0.22
Pressure of emergencies ⁴	64.72	-1.53
Mortality in emergencies (%)	0.18	
Telemedicine appointments	115,702	47.17
International health⁵		
Patients attended	21,824	
Appointments for travellers	18,929	
Appointments for imported diseases	2,895	
Vaccinations	40,874	

Source: SAP Asistencial, CMBD and PROSICS. Data extracted in March 2014.

1. Includes emergencies of more than 24 hours

2. Include hospital outpatient and primary healthcare consultations.

3. Major ambulatory surgery discharges/total surgical discharges.

4. % emergency admissions/total admissions.

5. In 2013, the integration took place of the Drassanes and Vall d'Hebron international health units, therefore it is not possible to provide a percentage for the variation in activity with respect to 2012.

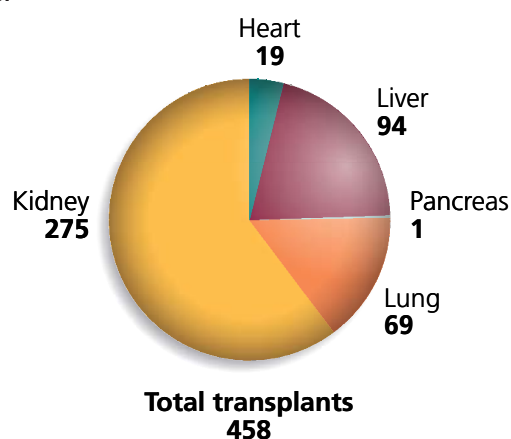


Tertiary and high-complexity procedures

	Vall d'Hebron Hospital		Bellvitge Hospital	Germans Trias Hospital	Total
	Paediatric	Adults			
Transplants	32	178	191	57	458
Heart	5	–	14	–	19
Liver	10	27	57	–	94
Pancreas	–	–	–	1	1
Lung	3	66	–	–	69
Kidney	14	85	120	56	275

Source: Catalan Transplants Organisation (OCATT).

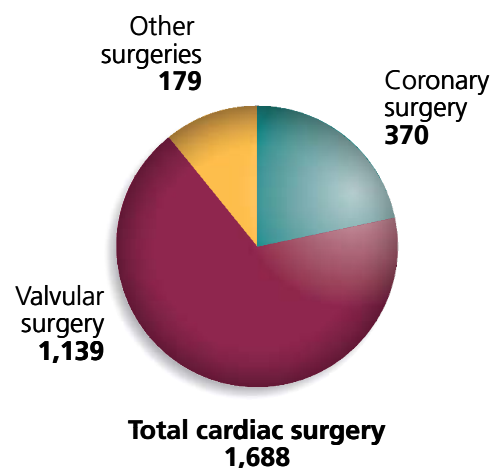
The 458 transplants carried out in ICS hospitals during the year 2013 represent 55.2% of the total transplants carried out in Catalonia. In the case of lung transplants, Vall d'Hebron carried out all of the interventions.



	Vall d'Hebron Hospital	Bellvitge Hospital	Germans Trias Hospital	Total
Cardiac surgery	770*	459	459	1,688
Coronary surgery	142	121	107	370
Valvular surgery	497	309	333	1,139
Other surgeries	131	29	19	179
Parkinson's and epilepsy surgery	–	15	18	33
Parkinson's surgery	–	11	18	29
Epilepsy surgery	–	4	–	4

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

Source: CMBD.



	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 catheterisations	1,310	3,693	1,688	1,581	1,319	2,116	–	–	11,707
Diagnostic	847	2,120	1,014	953	789	1,417	–	–	7,140
Therapeutic	463	1,573	674	628	530	699	–	–	4,567
Interventional radiology*	571	1,597	801	180	356	2,791	51	44	6,391
Oncological surgery	155	521	287	141	319	393	32	19	1,867
Bronchi and lungs	12	96	105	53	60	99	–	–	425
Oesophagus	–	22	8	–	14	4	–	–	48
Stomach	19	51	22	15	32	46	–	1	186
Liver metastasis	28	99	18	–	67	55	–	1	268
Pancreas	13	54	9	1	12	10	–	–	99
Rectum	42	87	57	29	94	89	32	17	447
Central nervous system	41	112	68	43	40	90	–	–	394
Other procedures									
Instrumental spinal surgery	97	259	140	109	116	226	32	9	988
Cochlear implants	–	3	20	–	–	1	–	–	24

Source: CMBD.

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

Case mix analysis

The eight ICS hospitals form part of the comprehensive public use healthcare service of Catalonia (SIS-CAT). These centres act as basic, general and referral hospitals for the population in their catchment area. The Vall d'Hebron, Bellvitge and Germans Trias hospitals area are also accredited as third-level hospitals: This means hospitals that are equipped with high-technology services and very high-level professional expertise and experience in order to be able to attend to those health problems that require high-level technological resources and specialist practice.

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)¹ 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.

	RFE	RAE	RRE	RCE	RME
Arnau de Vilanova Hospital	0.979	1.055	0.956	0.924	0.816
Bellvitge Hospital	0.959	1.045	0.985	0.907	0.918
Germans Trias i Pujol Hospital	1.020	0.982	0.930	1.037	0.874
Joan XXIII Hospital	0.956	1.043	0.998	0.915	0.876
Josep Trueta Hospital	0.975	1.007	1.070	0.942	0.929
Vall d'Hebron Hospital	0.988	1.020	0.950	0.964	0.992
Verge de la Cinta Hospital	0.973	1.031	1.047	0.985	0.830
Viladecans Hospital	0.971	1.021	0.985	1.152	0.823
Total	0.982	1.019	0.969	0.950	0.910

Period: January-December 2013.

Source: CMBD-HA (AIR).

The **standard functioning ratio (RFE)** 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, it shows greater efficiency. Values higher than 1 indicate a greater consumption of resources and a lower efficiency than the standard being used for comparison.

The **standard ambulatory surgery ratio (RAE)** 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 rate for cases than the standard. Values below 1 indicate a lower degree of ambulatory surgery than the standard being used for comparison.

The progressive implementation of major ambulatory surgery (CMA) has allowed an increase in the number of procedures and interventions in which patient admission is not necessary 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 (RRE)** 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. Values higher than 1 indicated lower quality and less efficiency than the standard being used for comparison.

Readmissions play an important role as an indicator of quality of care, given that readmission of a patient to hospital before 30 days have passed since discharge indicates the existence of an anomaly, whether during the prior stay at the hospital or alternatively in the outpatient and home care provided.

The **standard complications ratio (RCE)** is the relationship between the number of complications observed and that of the complications expected according to the standard. Values lower than 1 indicate that the hospital presents fewer complications than the standard being used for comparison, i.e. showing greater quality and efficiency. Values higher than 1 indicate lower quality and less efficiency than the standard being used for comparison.

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 suffer them.

The **standard mortality ratio (RME)** 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. Values higher than 1 indicate less quality than the standard being used for comparison.

It is necessary to insist on the need never to interpret the indicators separately, but always together with other related indicators. Thus, if we wish to use the indicators of readmissions to refer to healthcare quality, we will have to interpret them together with those of mortality, and if we want to use them to study efficiency, we should resort to standardised functioning and outpatient surgery ratios.



Most complex medical DRGs

DRG	Description	Discharges 2012	Discharges 2013	DRG weight
541	Simple pneumonia and other respiratory disorders, except bronchitis and asthma, with major complications	6,142	5,469	2.343
373	Vaginal delivery without complications	5,400	5,144	0.580
127	Heart failure and shock	3,048	3,002	1.422
544	Congestive heart failure and cardiac arrhythmia with major complications	2,943	2,922	3.420
372	Vaginal delivery with complications	3,172	2,833	0.700
243	Medical back problems	1,478	2,041	0.785
014	Stroke with intracranial infarction	1,804	1,957	1.880
088	Chronic obstructive pulmonary disease	1,794	1,645	1.147
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions, and headache, with major complications	1,360	1,527	4.430
557	Hepatobiliary and pancreatic disorders, with major complications	1,330	1,514	3.768
569	Disorders of the kidney and urinary tract, except renal failure, with major complications	1,166	1,337	1.735
552	Disorders of the digestive system, except for esophagitis, gastro-enteritis, and uncomplicated ulcer, with major complications	1,045	1,097	3.241
320	Kidney and urinary tract infections, age > 17, with complications	1,024	1,066	1.052
321	Kidney and urinary tract infections, age > 17, without complications	1,092	1,064	0.682
589	Bronchitis and asthma, under age 18, with major complications	1,195	1,049	1.736
203	Malignant neoplasm of hepatobiliary system or pancreas	945	1,011	1.825
350	Inflammation of male genitals	1,071	1,002	0.676
204	Disorders of the pancreas, except for malignant neoplasm	837	924	0.985
316	Kidney failure	966	910	1.393
629	Neonate, weight over 2499 g, without significant surgery	1,280	903	0.236

Source: CMBD-HA. Version: GRD AP 25.

Most complex medical DRGs with paediatrics

DRG	Description	Discharges 2012	Discharges 2013	DRG weight
602	Neonate, birth weight < 750 g, alive at discharge	22	26	42.401
604	Neonate, birth weight 750-999 g, alive at discharge	45	48	31.158
605	Neonate, birth weight 750-799 g, exitus	10	13	16.641
607	Neonate, weight at birth 1000-1499 g, without significant surgery, alive at discharge	170	158	13.766
603	Neonate, birth weight < 750 g, exitus	13	13	12.937
576	Acute leukaemia with major complications	107	122	12.638
608	Neonate, weight at birth 1000-1499 g, exitus	11	10	11.876
881	Respiratory system diagnosis, with mechanical ventilation for more than 96 hours	164	156	10.749
611	Neonate, birth weight 1500-1999 g, without significant surgical procedure, with multiple major problems or mechanical ventilation for 96 hours or more	64	68	8.303
707	HIV with mechanical ventilation or feeding support	19	28	6.887
706	HIV with multiple related major infections, without tuberculosis	5	11	6.657
782	Acute leukaemia without major surgical procedure, aged > 17, with complications	42	45	6.551
578	Lymphoma and non-acute leukaemia, with major complications	182	157	6.428
794	Diagnosis of significant multiple trauma, with major non-traumatic complications	48	38	6.099
780	Acute leukaemia, without major surgical procedure, age < 18, with complications	61	48	5.481
612	Neonate, birth weight 1500-1999 g, without significant surgical procedure, without multiple major problems	126	93	4.854
882	Respiratory system diagnosis, with mechanical ventilation < 96 hours	284	265	4.643
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions, and headache, with major complications	1,360	1,527	4.430
577	Myeloproliferative disorders and poorly differentiated neoplasms, with major complications	103	101	4.156
126	Acute and subacute endocarditis	52	63	4.156

Source: CMBD-HA. Version: GRD 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 2012	Discharges 2013	DRG weight
576	Acute leukaemia with major complications	67	79	12.638
881	Respiratory system diagnosis, with mechanical ventilation for more than 96 hours	148	144	10.749
707	HIV with mechanical ventilation or feeding support	19	28	6.887
706	HIV with multiple related major infections, without tuberculosis	5	11	6.657
782	Acute leukaemia without major surgical procedure, aged > 17, with complications	42	45	6.551
578	Lymphoma and non-acute leukaemia, with major complications	173	150	6.428
794	Diagnosis of significant multiple trauma, with major non-traumatic complications	44	35	6.099
882	Respiratory system diagnosis, with mechanical ventilation < 96 hours	259	244	4.643
533	Other disorders of the nervous system, except transitory ischemic attack, convulsions, and headache, with major complications	1,325	1,493	4.430
577	Myeloproliferative disorders and poorly differentiated neoplasms, with major complications	82	79	4.156
126	Acute and subacute endocarditis	51	63	4.156
561	Osteomyelitis, septic arthritis and connective tissue disorder, with major complications	119	161	4.149
709	HIV with major related diagnoses, with multiple or significant major diagnoses, with tuberculosis	8	12	4.068
584	Septicaemia, with major complications	561	692	3.816
557	Hepatobiliary and pancreatic disorders, with complications	1,316	1,498	3.768
568	Kidney failure, with major complications	332	340	3.591
123	Circulatory disorders, with IAM, exitus	118	102	3.501
800	Tuberculosis, with complications	34	38	3.467
827	Non-extensive burns, with lesions due to smoke inhalation, complications, or significant trauma	16	39	3.445
880	Acute ischemic accident, with use of thrombolytic agent	360	339	3.428

Source: CMBD-HA. Version: GRD 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 2012	Discharges 2013	DRG weight
039	Crystalline lens surgery with or without vitrectomy	9,544	9,611	0.917
266	Skin grafting or debridement, except for skin ulcer/cellulitis, without complications	1,340	2,106	1.434
359	Uterine and adnexal surgery due to non-malignant carcinoma <i>in situ</i> , without complications	2,040	1,799	1.098
042	Intraocular surgery, except retina, iris, and crystalline lens	1,472	1,748	1.074
055	Miscellaneous surgery of the ear, nose, mouth, and throat	1,465	1,674	0.756
040	Extraocular surgery, except orbit, age 17 and older	1,315	1,544	0.818
169	Mouth interventions, without complications	976	1,487	0.874
371	Caesarean section, without complications	1,734	1,456	0.869
311	Transurethral interventions, without complications	1,405	1,441	0.803
808	Percutaneous coronary interventions (angioplasty) with acute myocardial infarction, cardiac arrest, or shock	1,423	1,428	2.701
209	Substitution of major joint, except hip, and re-implanting of lower limb, except for complications	1,310	1,372	3.279
116	Other permanent cardiac pacemaker implants	1,346	1,364	3.591
158	Anal surgery and enterostomy, without complications	1,269	1,357	0.659
818	Hip replacement, except for complications	1,321	1,356	3.607
162	Inguinal and femoral hernia surgery, age 17 and older, without complications	1,179	1,335	0.740
229	Hand or wrist surgery, except major joint surgery, without complications	1,187	1,313	0.880
225	Foot surgery	1,120	1,140	1.241
494	Laparoscopic cholecystectomy, without bile duct exploration without complications	1,068	1,112	0.962
119	Vein ligation and stripping	1,275	1,110	0.890
381	Abortion with dilation, curettage, aspiration, or hysterotomy	1,184	1,100	0.587

Source: CMBD-HA. Version: GRD AP 25.



Most complex surgical DRGs with paediatrics

DRG	Description	Discharges 2012	Discharges 2013	DRG weight
877	Extracorporeal membrane oxygenation or tracheostomy with mechanical ventilation for more than 96 hours	517	545	48.409
103	Heart transplant or implantation of a cardiac assist system	19	20	37.910
606	Neonate, weight at birth 1000-1499 g, with significant surgical procedure, alive at discharge	22	19	34.042
795	Lung transplant	62	69	34.036
480	Liver transplant and/or intestinal transplant	103	94	31.819
878	Tracheostomy with mechanical ventilation for more than 96 hours or without principal ENT diagnosis, without major surgical procedures	270	273	29.815
803	Allogeneic bone marrow transplant	57	59	23.649
615	Neonate, birth weight 2,000- 2,499 g, with significant surgical procedure, with multiple major problems	20	12	17.655
804	Autologous bone marrow transplant	68	65	15.319
545	Heart valve surgery with major complications	314	378	14.133
547	Other cardiothoracic surgery, with major complications	36	44	12.733
792	Diagnosis of significant multiple trauma, with major non-traumatic complications	6	10	12.374
622	Neonate, birth weight > 2,499 g, with significant surgical procedure, with multiple major problems	76	81	11.093
530	Craniotomy with major complications	319	311	10.995
850	Defibrillator implant with cardiac catheterization, without acute myocardial infarction, cardiac arrest or shock	15	26	10.925
793	Surgery due to significant multiple trauma except craniotomy with major non-traumatic complications	99	83	10.431
302	Kidney transplant	283	275	10.337
549	Major heart surgery with major complications	375	438	10.068
851	Defibrillator implant without cardiac catheterization	134	67	9.466
546	Coronary bypass surgery with major complications	104	96	9.243

Source: CMBD-HA. Version: GRD 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 surgical DRGs without paediatrics

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877	Extracorporeal membrane oxygenation or tracheostomy with mechanical ventilation for more than 96 hours	506	537	48.409
103	Heart transplant or implantation of a cardiac assist system	17	14	37.910
795	Lung transplant	61	66	34.036
480	Liver transplant and/or intestinal transplant	94	84	31.819
878	Tracheostomy with mechanical ventilation for more than 96 hours or without principal ENT diagnosis, without major surgical procedures	267	271	29.815
803	Allogeneic bone marrow transplant	25	31	23.649
804	Autologous bone marrow transplant	53	57	15.319
545	Heart valve surgery with major complications	307	370	14.133
547	Other cardiothoracic surgery, with major complications	20	22	12.733
530	Craniotomy with major complications	298	295	10.995
850	Defibrillator implant with cardiac catheterization, without acute myocardial infarction, cardiac arrest or shock	15	26	10.925
793	Surgery due to significant multiple trauma except craniotomy with major non-traumatic complications	99	82	10.431
302	Kidney transplant	274	262	10.337
549	Major heart surgery with major complications	371	433	10.068
851	Defibrillator implant without cardiac catheterization	133	64	9.466
546	Coronary bypass surgery with major complications	104	96	9.243
579	Procedures for lymphoma, leukaemia, and myeloproliferative disorder, with major complications	89	69	9.230
104	Heart valve procedures and other major cardiothoracic surgery, with cardiac catheterisation	46	35	8.726
833	Intracranial vascular procedures, with principal diagnosis of haemorrhage	75	80	8.671
879	Craniotomy with major device implant or chemo implant or principal diagnosis of complex acute central nervous system	212	176	8.626

Source: CMBD-HA. Version: GRD 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.



Waiting lists

As at 31 December 2013, the eight ICS hospitals had a total of 17,853 patients on surgery waiting lists for the 14 guaranteed procedures (cataracts, varicose veins, hernias, cholecystectomies, arthroscopies, prostatectomies, carpal tunnel, tonsillectomies, circumcisions, hip prostheses, knee prostheses, hysterectomies, bunions, and pilonidal cysts). Some 33.8% (6,032) of these patients had been waiting for longer than six months, which is the maximum waiting time established by CatSalut.

With the aim of reducing this percentage to the maximum, the ICS is working on a specific plan for managing surgical waiting lists to achieve that, by 31 De-

cember 2014, the majority of procedures have patients on waiting lists within the set guaranteed waiting.

For these purposes, the ICS Management, which considers this issue to be a priority and a strategic objective, has agreed with each hospital the maximum delay for each one of these 14 procedures, always taking into account the capacities and possibilities of surgical reorganisation at each centre and the need to meet budgets. The organisational effort that is being made focuses on prioritising interventions among those patients that, in conditions of clinical equality, have been waiting for the longest time.

Procedures under guarantee	Patients on the list	Less than 6 months		More than 6 months	
Cataracts	7,318	5,029	68.7%	2,289	31.3%
Varicose veins	727	483	66.4%	244	33.6%
Hernias	1,189	918	77.2%	271	22.8%
Cholecystectomies	823	532	64.6%	291	35.4%
Arthroscopies	1,165	728	62.5%	437	37.5%
Prostatectomies	580	459	79.1%	121	20.9%
Carpal tunnel	432	345	79.9%	87	20.1%
Tonsillectomies	660	432	65.5%	228	34.5%
Circumcisions	636	430	67.6%	206	32.4%
Hip prosthesis	740	436	58.9%	304	41.1%
Knee prosthesis	2,097	1,036	49.4%	1,061	50.6%
Hysterectomies	258	195	75.6%	63	24.4%
Bunions	961	591	61.5%	370	38.5%
Pilonidal cysts	267	207	77.5%	60	22.5%
Total	17,853	11,821	66.2%	6,032	33.8%

Source: CatSalut. Situation as at 31 December 2013. Data extracted in June 2014.



Pharmacy

The ICS's strategic objectives in the pharmacy sphere are to promote the healthy and careful prescribing of medicines, encourage the rational, safe and appropriate use of medications and healthcare products, promote quality, equal access and efficient management of the pharmaceutical service and improve the population's health results.

According to the degree of complexity and multi-disciplinary nature of healthcare, as well as the monitoring of the evolution of the patient's state of health, it is important to differentiate between medicines with a doctor's prescription that are dispensed at pharmacies from hospital outpatient dispensing (OPD) medicines which are given by pharmacy services to patients not admitted to hospital via a medical order.

The introduction of the electronic prescription, which substitutes traditional paper prescriptions, represents an important step forward in terms of improved healthcare quality, ease and simplification of access for patients (especially in the case of collection of prescriptions) and safety in the use of medicines due to the possibilities offered in terms of therapeutic monitoring and control of duplicities and interactions. It

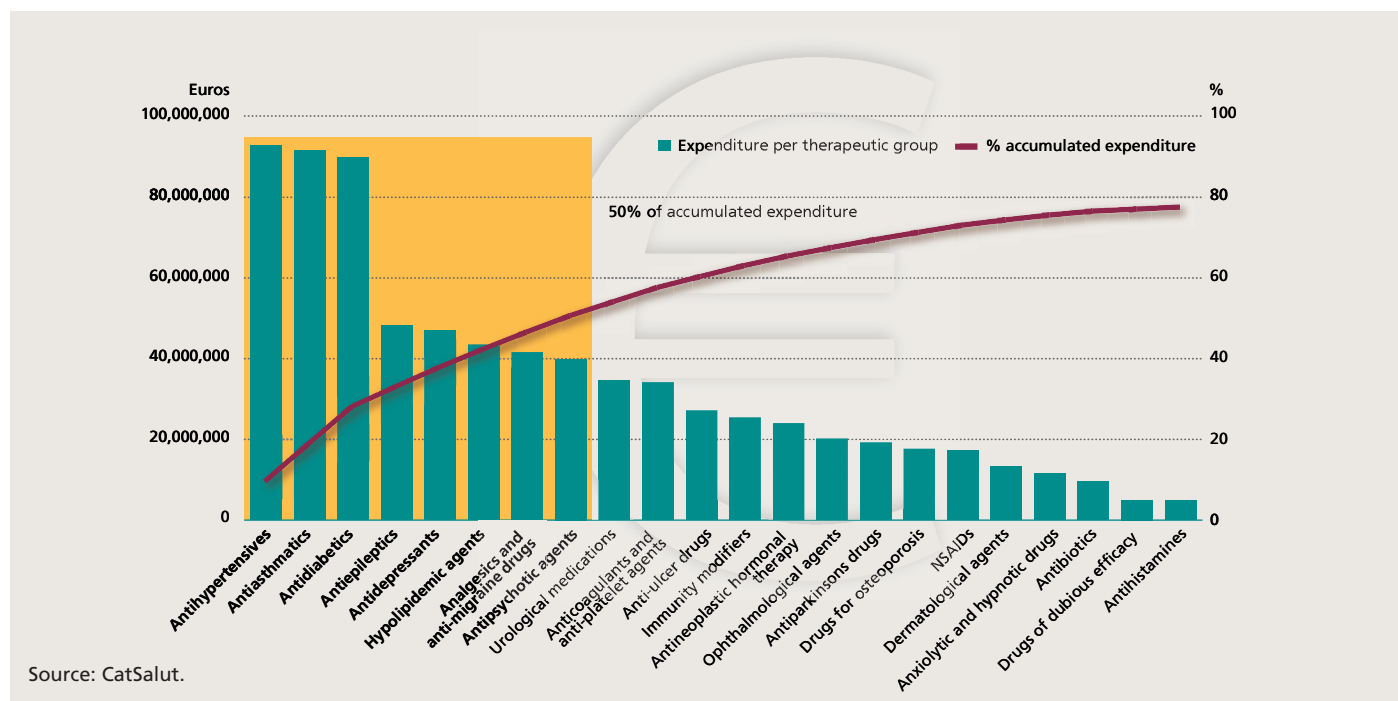
also contributes to improving the processes of prescribing and dispensing and favours more rational consumption by patients. The introduction of the electronic prescription, both in primary healthcare and specialty healthcare has managed to integrate the prescription of the different healthcare levels into a single therapeutic plan. In short, it favours a higher quality pharmaceutical service that is more sustainable for the entire healthcare system.

This process of progressive implementation has allowed the change to be made from paper prescriptions to therapeutic plans with all the necessary guarantees, both with respect to security in the exchange of information and to the protection and confidentiality of people's data.

During the year 2013, there has been a 37% reduction in the number of therapeutic duplicities in existence (53,843) in the active prescription of patients. There was also a reduction of 50% in the number of patients with counter-indicated medication that had a safety alert from the Spanish Agency for Medication and Healthcare Products.

Pharmaceutical prescriptions dispensed at pharmacies

Expenditure per therapeutic group



The consumption pattern of medicines with a doctor's prescription is the usual pattern. As observed in the graph, eight therapeutic groups represent 50% of the accumulated expenditure. Among the drugs groups that have generated the greatest expenditure, prominent are antihypertensives, anti-asthmatics, anti-diabetic and anti-epileptic agents.

Indicators of the measure of adherence to the ICS Pharmacotherapy Guide

Monitoring adherence to the ICS Pharmacotherapy Guide is an important objective for adjusting treatments to a correct selection of drugs.

Adherence to the ICS Pharmacotherapy Guide 2013	Primary Healthcare	Hospital Care
Adherence to the ICS Pharmacotherapy Guide ¹	–	71.51
Following of PHF-APC ² recommendations	1.82	2.46
Use of antihypertensives ³	38.06	49.41
Use of non-insulin anti-diabetic agents ⁴	80.34	45.82

1. Percentage of medicines prescribed and recommended in the ICS Pharmacotherapy Guide.

2. Percentage of medicines prescribed and evaluated by the Programme for the Pharmacotherapeutic Harmonisation of Medicines in the Sphere of Primary and Community Healthcare (PHF-APC) of CatSalut with a more suitable alternative.

3. Percentage of use of ARA II with respect to the use of ACE inhibitors and ARA II (ARA II: Angiotensin II Receptor Antagonists; ACE inhibitors: Angiotensin Converting Enzyme Inhibitors).

4. Percentage of recommended non-insulin anti-diabetic agents prescribed.

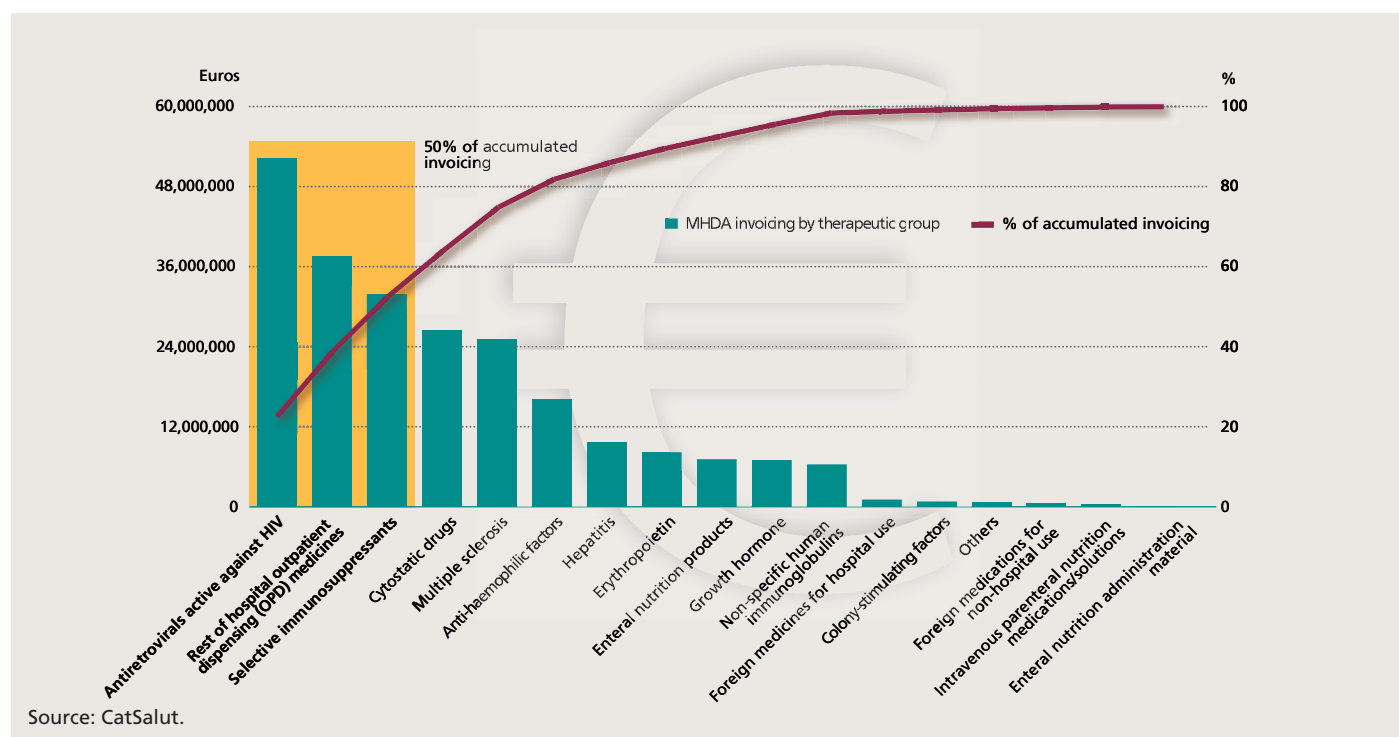
Evolution of dispensed pharmaceutical prescriptions (packages)

Prescriptions	2013	% variation 2013/2012
Primary Healthcare	92,852,940	-6.9
Electronic	86,224,237 (92.9%)	3.1
Hospitals	1,598,330	1.6
Electronic	1,092,962 (68.4%)	525.4
Total ICS	94,451,928	-6.7
Electronic	87,317,199 (92.4%)	4.2

These figures for dispensed prescriptions show the level of use of the electronic prescription by primary healthcare teams and hospitals of the ICS. The electronic prescription in specialized care is now implemented at all centres and continues evolving with fast progression towards the target of eliminating paper prescriptions as soon as possible.

Source: CatSalut.

MHDA invoicing by therapeutic group



Source: CatSalut.

The pattern of consumption of the MHDA is the usual pattern. As can be observed in the graph, three therapeutic groups concentrate 50% of the invoicing: antiretrovirals active against HIV, rest of outpatient dispensed hospital medicines (prominently including high-complexity treatments and drugs for the treatment of pulmonary hypertension) and selective immunosuppressants. The chronification of diseases that previously had less therapeutic possibilities has especially increased consumption of these high-cost drugs.

► Financial Management

Budget result for the financial year 2013: income and expenditure

The initial budget assigned to the ICS by the Parliament of Catalonia for the year 2013 was €2,518.65 M. This budget includes as the main source of income, some 97.41%, the transfers that the ICS received from the Catalan Health Service (CatSalut) in exchange for the healthcare activity provided by its centres and that is set in the programme contract. A much lower percentage, some 2.59%, corresponds to income from healthcare services provided to paying third parties and other income and transfers for non-care services such as rental of spaces, compensation of expenses, continuous training fund, etc.

Over the course of the year, the ICS's own income — i.e. income that does not stem from CatSalut transfers — has grown from an initial forecast of €65 M to a final result of €78.92 M, some 21.4% above the initial forecasts. Part of this income (€4.09 M) represented an increase in the expenses budget (generation of credit due to greater income or for a determined purpose). The rest of the increase in income has grown revenue, but has not meant any greater spending capacity for the ICS. Therefore, at the close of the 2013 financial year, the ICS settled its revenues at a total amount of €2,532.89 M.

As for the budgetary close of the expenditure of the ICS for the financial year 2013, it presents an important endeavour to reduce regular operating costs, especially personnel expenditure, with a reduction in fixed remuneration (regular staff), variable remuneration (continuous care, medical shift work, etc.), and due to the effect of the previous reductions, a reduction in the expenditure for social security contributions, despite their individual increases. The expenditure on regular goods and services has also been reduced, although to a lesser extent, especially expenditure on structural services (cleaning, laundry, etc.). The global expenditure on pharmacy has been maintained and compensation made for the increases in procurements of healthcare supplies resulting from the repercussion of the increase in IVA (VAT) in September 2012.

In 2013, the ICS increased its investments with the replacement of deteriorated or obsolete healthcare equipment and the adjustment and improvement of both installations and care spaces.

Globally, the ICS has fulfilled the obligations arising from its programme contract with CatSalut in terms of provision of healthcare services, with a reduction in expenditure that has enabled an increase in healthcare activity along with gains in productivity and more efficient management of resources.

Initial Budget 2013 (adjusted 2012 extension)	2,518,650,000.00
CatSalut Transfer (assignment)	2,453,650,000.00
Own income (assignment)	65,000,000.00
Budget modifications	4,094,340.84
Transfer to CatSalut (mental health of Barcelona)	-1,645,246.27
Transfer from CatSalut (peritoneal dialysis and other healthcare activities)	1,973,675.36
Generation of credit through income from:	3,765,911.75
Lleida Provincial Council	1,446,660.85
Ministry of Health (Rational use of medication)	820,000.00
Continuous training fund	777,417.28
Research grants	547,000.00
Ministry of Health (transplants)	85,578.25
Others	89,255.37
Final Budget 2013	2,522,744,340.84
Expenditure in the 2013 financial year (liabilities)	2,558,335,545.82
Personnel expenses	1,661,070,193.97
Expenses in operating goods and services	880,552,952.61
Current transfers	541,507.99
Real investments	16,170,891.25
Final Budget 2013	-35,591,204.98

Data not included in the budgetary close

Revenue raised that has not generated additional expenditure credits	10,149,291.63
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In euros.



Productivity and efficiency indicators

In the financial year 2013, the ICS has consolidated the tendency made evident in recent years towards improved productivity and efficiency. Thanks to the continued effort of its professionals, in the year 2013 the global productivity of the ICS increased by 1.83%, which, added to the increase obtained in the year 2012, results in each professional at the ICS having produced 5% more healthcare activity than in 2011. This effort in productivity has been amplified by other

management measures that have allowed consolidation of the reduction in running expenses per healthcare unit. Together with that of the previous year, this has made it possible for the ICS to reduce its operating expenditure per healthcare unit by over 8%, despite the increase in VAT, in the cost of healthcare products, and in Social Security contributions, among other factors. This saving means that for every euro spent, more healthcare services are offered.

	Productivity UME / healthcare workforce*			Efficiency CAP I+II (excluding OPD) / UCUM		
	2012	2013	% variation 2013/2012	2012	2013	% variation 2013/2012
Hospital Care						
Hospital level I	32.12	33.19	3.33	2,265.08 €	2,192.73 €	-3.19
Viladecans	32.12	33.19	3.33	2,265.08 €	2,192.73 €	-3.19
Hospitals level II	27.08	28.15	3.97	3,031.39 €	2,907.75 €	-4.08
Arnau de Vilanova	28.69	28.86	0.58	2,837.05 €	2,840.34 €	0.12
Joan XXIII	27.09	29.38	8.45	3,002.20 €	2,776.13 €	-7.53
Josep Trueta	24.78	26.20	5.75	3,379.72 €	3,169.74 €	-6.21
Verge de la Cinta	28.33	28.37	0.13	2,876.58 €	2,805.91 €	-2.46
Hospitals level III	22.91	23.07	0.69	3,682.73 €	3,616.54 €	-1.80
Bellvitge	23.70	24.44	3.14	3,525.60 €	3,446.07 €	-2.26
Germans Trias	26.85	27.26	1.55	3,156.70 €	3,007.92 €	-4.71
Vall d'Hebron	21.04	20.76	-1.33	4,025.20 €	4,024.59 €	-0.02
Total hospitals	24.40	24.85	1.83	3,416.61 €	3,326.96 €	-2.62

* Does not include non-medical staff.

In the sphere of primary healthcare, there is ongoing evidence of the endeavour of professionals in continuous improvement by adapting treatments to meet criteria of safety, clinical effectiveness, and efficiency. This means not only a reduction in pharmacy expenditure

and a greater availability of resources for other cost-effective treatments, but also an improvement in the health of citizens. In terms of running costs, the improvements in efficiency have been consolidated but with greater stabilization of per capita expenditure.

	Net pharmacy expenditure per capita / weighted population attended (age)			Running costs* of primary healthcare per capita / weighted population attended (age)		
	2012	2013	% variation 2013/2012	2012	2013	% variation 2013/2012
Primary Healthcare						
Alt Pirineu i Aran	250.25 €	221.38 €	-11.53	179.61 €	177.24 €	-1.32
Barcelona Ciutat	262.52 €	232.31 €	-11.51	148.77 €	148.27 €	-0.33
Camp de Tarragona	226.91 €	206.84 €	-8.84	140.22 €	139.09 €	-0.81
Catalunya Central	226.41 €	203.96 €	-9.92	138.22 €	137.50 €	-0.52
Costa de Ponent	233.79 €	208.51 €	-10.82	122.62 €	122.03 €	-0.48
Girona	204.37 €	190.26 €	-6.90	127.87 €	126.35 €	-1.18
Lleida	242.04 €	215.58 €	-10.93	133.29 €	131.86 €	-1.07
Metropolitana Nord	223.02 €	202.17 €	-9.35	122.41 €	120.96 €	-1.19
Terres de l'Ebre	246.02 €	227.41 €	-7.57	124.86 €	126.23 €	1.10
Total Primary Healthcare	234.22 €	210.75 €	-10.02	131.81 €	130.89 €	-0.70

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

The revision of the Order of public prices and other measures implemented have meant that, in the year 2013, income for services provided to third parties at the centres of the ICS have reached 45.6 million euros.



Some 12.4% of invoices processed were done so in electronic format.

The ICS increased its income from third-party billing by 25%

On 1 March 2012, the new ICS Public Prices Order entered into force. It updated the list of invoiceable services and the unit prices valid to date. This updating enabled a very significant increase in the number of activities identifiable as possibly subject to being invoiced to paying third parties and, at the same time, the adjustment of their prices to their real cost.

The revision of the Order of public prices and other measures implemented within the organisation have meant that, in the year 2013, income from providing services to third parties at ICS centres reached some 45.6 million euros, a sum that represents an increase of 25% with respect to that of the year 2012 (€36.5 M).

It must be remembered that income for services provided to third parties correspond to the healthcare that the ICS provides to people not covered by the public healthcare service and to other activities related with the healthcare services, such as collaboration agreements with other institutions, road traffic accidents, accidents at work, etc.

Some 80% of the purchases that are made by the ICS are now aggregated; double the amount of five years ago

The ICS purchasing, contracting and logistics model is based on the impetus of the mass aggregated purchase of intermediate goods, services and products for the entire organization and on the systematic use of a logistics operator (Logaritme) entrusted, among other tasks, with the distribution of supplies.

Aggregated purchasing includes a policy for the joint purchasing and contracting of goods and services for all the centres in the organisation. The existence of a single master catalogue for everyone with 137,000 articles is also an indispensable requirement.

The main groups of articles that are acquired in an aggregated way are medicines, pharmaceuticals and parapharmaceuticals, diverse healthcare supplies, laboratory supplies, prosthetics, surgical implants and orthotics, non-healthcare consumables, instruments and intermediate products.

The ICS has set the objective of improving the efficiency of its purchasing and contracting processes, both from the viewpoint of speed and quality in processing as well as from the economic perspective, given that the model allows for working with economies of scale.

The ICS leads the healthcare and public administrations sector in the use of electronic invoicing

In the year 2012, the ICS began a pilot test to generalise the use of the electronic invoice at all levels of the organisation. During the year 2013, this process was consolidated and of 330,300 invoices processed, 40,793 invoices from 133 different suppliers have been in electronic format.

The use of the electronic invoice allows a reduction in transaction costs, an improvement in the management of economic procedures, greater security, an increase in service quality, and more streamlined dealings with suppliers.

The electronic invoicing solution introduced, common to all the Catalan public administrations, facilitates the relationship with supplier companies and offers all the requisite technological, legal and security guarantees.

► Strategic Projects

The project to transform the ICS is reoriented to adapt it to the Parliament of Catalonia resolution

In the month of October 2013, the Parliament of Catalonia passed a resolution urging the Government to carry out the actions necessary to maintain public ownership of the Catalan Health Institute and include it in the epigraph of public law organisations of the budgets of the Generalitat of Catalonia, giving compliance to the legal nature granted to it by Law 8/2007, on the ICS. The objective was to promote the implementation of the Law and allow the ICS to evolve and stand as a true public company that is more flexible, decentralised, efficient, sustainable, competitive, adaptable to changes and close to the healthcare needs of the population, with access to the same management instruments as the rest of the sector's public companies.

Within the framework of Article 12 of Law 8/2007, the Parliament's resolution also requests promotion of the ICS's territorial integration with the rest of suppliers of the public use healthcare network in order to facilitate care coordination, continuity of access for the public and compliance with the healthcare policy objectives within the context of the Health Plan of Catalonia.

Thus, the ICS reformulation project, as proposed initially, was subject to a reorientation to adapt it to the Parliamentary resolution. In any event, the ICS Management has continued working so that the management instruments offered thanks to the fact that it is a public company are at the service of high-quality, efficient, sustainable and accessible healthcare, that provides a response to the needs of citizens, facilitating the networking and integration of the different healthcare facilities in the reference territories.

The process of integration of the ICS's radio-diagnosis and nuclear medicine services into the IDI begins in Tarragona, Terres de l'Ebre and Girona

The Diagnostic Imaging Institute (IDI) is a CatSalut public company that manages, administrates, and executes a part of the diagnostic imaging and nuclear medicine services for the ICS's hospitals. These services coexist with the ICS's own radio-diagnosis services.

The desire of the boards of directors of both institutions is that the IDI should be the organization that manages all radiodiagnosis and nuclear medicine services for the ICS, even though it may also provide services to other organizations in the Catalan healthcare sector.

The aim is to achieve a comprehensive healthcare model for diagnostic imaging and nuclear medicine to give a more efficient response to the diagnostic and therapeutic needs of the general public. This new model must be competitive and sustainable, therefore it has to promote economies of scale and make the best possible use of the professional expertise and of the resources that exist. It must also allow for the expansion, renewal and upgrading of the technological pool of the ICS's hospitals and primary healthcare centres.

The Parliamentary resolution also requests promotion of the territorial integration of the ICS with the rest of the public healthcare network providers in order to facilitate healthcare coordination, continuity of access for citizens and the fulfilment of the objectives of the Health Plan.

The aim is to achieve a comprehensive healthcare model for diagnostic imaging and nuclear medicine, and give a more efficient response to the diagnostic and therapeutic needs of the general public.

In the year 2013, the clinical laboratories of the ICS attended to five million requests and carried out more than 54 million analytical determinations.



The new IDI will drive professional development, as it will allow all specialist staff, in both radiology and nuclear medicine, to have access to the same technology from the different care levels. It will also reinforce work in collaboration through teleradiology or second opinions from referral professionals.

This new configuration will also mean the adaptation of the offering in radiology and nuclear medicine to the specific needs of each region and an improvement in healthcare quality and in service to the public.

The ICS advances in the process of territorial unification of its clinical laboratories

During the year 2013, the ICS continued advancing in the process of territorial unification of its clinical laboratories with the aim of optimizing the management of resources, improving economies of scale, integrating information systems, and improving the efficiency of hospital and primary healthcare laboratories to enable them to be more competitive.

The project, which was launched in 2011 and is planned to finalize in 2015, proposes progressive reduction from the 12 initial laboratories to six territorial clinical laboratories that are networked.

Progress has also been made this year in the improvement of the Master Catalogue for clinical laboratories of the ICS, which gives a single code to each of the tests that it includes and allows information to be shared between the institution's different laboratories, integrating the results of tests into Primary Healthcare ECAP and Systems (SAP), establishing demand management mechanisms and facilitating the study of the costs of tests and by process. With the aim of the Catalogue maintaining the quality of its uniqueness, the procedure has been established for the inclusion in it of any new test.

Primary healthcare implements new organizational models

In order to strengthen the capacity for case resolution in primary healthcare and, at the same time, have access to more flexible services adaptable to the needs of each territory, the ICS has started to develop different organizational experiences oriented towards seeking the maximum efficiency of management and administration structures and identifying and improving key healthcare processes.

These new organisational models are based on a system of networked relations and responsibilities, focused on continuous improvement, knowledge management, innovation, quality and the proximity of the services that we offer to users from the first care level.

The aim is, in short, to organize primary healthcare in a different way so that it is increasingly more efficient, more accessible and more successful in resolving cases in order to increase the participation and sharing of responsibility of professionals in decision-making in the territory and, above all, to add value for citizens.

The ICS promotes the development of a collaborative healthcare model based on information systems and clinical management tools

During the year 2013, and within the context of the Primary Healthcare Clinical Workstation (ECAP), it is important to highlight the bringing on line of Active Clinical Intelligence, a new tool. It promotes a re-engineering of the entire healthcare process since it provides primary healthcare professionals with a global and personalised view of each patient and helps them in decision-making regarding diagnosis, treatment and monitoring. The module integrates in a single place the clinical practice guides, health programmes, healthcare protocols, clinical alerts and the monitoring of the most common health conditions.

Over the course of 2013, work has also begun on the development of the ECAP for mobility in order to adapt all the functionalities of the ECAP to mobile devices.

As regards the Healthcare SAP, in the year 2013 the transformation commenced of the corporate hospital information system to move from document management to clinical management through a healthcare processes creation tool that should enable the longitudinal monitoring of patients with shared clinical information and that will start functioning during the year 2014. The objective pursued is to reduce clinical variability, help with decision-making, and standardize actions, reducing routine functionalities and incorporating ergonomic improvements.

Finally, the ICS is also implementing joint solutions for ECAP and Healthcare SAP whose objective is the integration of common and standardised healthcare information without the healthcare professional having to move from his or her clinical workstation. These include:

- The Healthcare Process Interoperability Platform (PIPA), which will be deployed gradually for the electronic referral of patients with standardised flows of structured clinical information, to share clinical information and establish rules for help in clinical decision-making.
- Common clinical dictionaries.
- The single electronic prescription model for primary healthcare, both for the ICS and for other centres in the Comprehensive Healthcare System for Public Use (SISCAT) that wish to incorporate it.



The collaborative model



Electronic prescriptions



Electronic prescriptions in specialised healthcare



**Supplier organisations
that use ECAP**

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

**Supplier organisations
that use Healthcare SAP**

- 8 ICS hospitals
- Santa Maria Hospital in Lleida
- Pallars Regional Hospital
- Duran i Reynals Hospital
- Pere Virgili Healthcare Park
- Sant Hospital Foundation La Seu
- Blood and Tissues Bank
- Diagnostic Imaging Institute

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

The primary healthcare clinical workstation (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. It offers a comprehensive view of, and support to, clinical decision-making with a high level of safety and healthcare quality, and it provides information to professionals on the results of their activity. ECAP is integrated with Argos and with the shared medical history of Catalonia (HC3) and electronic prescription projects.

Since it was set up in the year 2001, ECAP has introduced constant improvements and new functionalities that help professionals in the course of their healthcare work. Fifteen 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.

At present, 19,000 healthcare professionals of the Comprehensive Public Use Healthcare System of Catalonia are using the ECAP, which now contains over six million medical histories. This represents a qualitative leap forward in the safety and quality of the care provided to users, since the majority of primary healthcare professionals have access to a patient's medical information, ordered and integrated in the same way, even if they are not working at an ICS centre.

Rolling out of the Argos Project continues beyond the ICS hospitals

The Sant Hospital La Seu Foundation has been the latest healthcare centre to incorporate Argos, the clinical workstation that is used by all ICS hospitals based on SAP technology. With this incorporation, there are now 13 centres in the public network that are sharing the same work platform.

The extension of Argos beyond the hospitals of the ICS allows the sharing of methodologies, tools and resources, favouring efficient collaboration between healthcare providers and facilities. It also facilitates an integrated view of the patient and guarantees alignment with the Catalan Ministry of Health's healthcare, management, and technological directives.

Having access to the same information system and integrated operating procedures also allows substantial improvements in the collaboration between centres and healthcare quality, while increasing efficiency in the planning and rational assignment of healthcare resources.

At present, 23,000 healthcare professionals of the Comprehensive Public Use Healthcare System of Catalonia are using Argos, which is interconnected with ECAP and with the HC3, electronic prescription systems and the Central Health-Insured Parties Register (RCA), among others.

The self-management model becomes generalised across the ICS

In the year 2013, the totality of primary healthcare teams of the ICS have been managed using the self-management model. This model, which was piloted in 2009 among 10 primary healthcare teams with excellent results, is based on professional empowerment, the decentralization of decisions, and a culture of accountability. It has gradually increased its

presence to date, and is now being followed by 100% of Primary Healthcare Teams (EAPs).

The model's objectives focus on improving clinical results and patient satisfaction, increasing professional staff satisfaction through accountability and incentivization, attaching prestige and value to professional skills, improving the efficiency of resources and the rationalization of expenditure, adapting the organization of units to regional needs and creating a culture of capitation-based financing.

Its main instruments are the existence of an explicit management agreement and an own functional plan that allows greater autonomy in the management of human and financial resources alike, with a detailed information system for the monitoring of clinical-care and economic data, updated monthly. With respect to the first, the possibility is envisaged of modifying the composition of the team, establishing the organization of working time, managing substitutions and formulating objectives for the Management by Targets (MBT) of professionals by the unit's management. It also considers the possibility of increasing revenue through invoicing of third parties or agreements and reassigning financial items according to expenditure needs. The possibility of enjoying a group incentive according to the results obtained in the assessment of the management agreement and co-accountability in the management of the pharmacy budget with the assuming of risks complement the possibility for improving the results.

Apart from its good healthcare and financial results and the satisfaction for professionals that the model has demonstrated, its generalization is justified by its consistency with the CatSalut purchasing system.



Constitution of the new single ICS management board for Camp de Tarragona, Terres de l'Ebre and the public company GIPSS

In the year 2013, progress was made in the project of single management boards as a tool to manage resources on a territorial basis, reinforcing the collaboration between healthcare providers in the same town or city.

The creation of a single ICS management board for Camp de Tarragona, Terres de l'Ebre and the public company Health Services Management and Provision (GIPSS) aims to establish synergies, optimize healthcare protocols, work as a team, pool expertise and knowledge, and, in short, improve the quality, outcome, and accessibility of the public healthcare services of Tarragona.

It aims to establish synergies, optimize healthcare resources, work as a team, pool expertise and knowledge, and, in short, improve the quality, outcome, and accessibility of the healthcare services.

The ICS has management agreements with each of the primary healthcare teams and paediatric lines and with the eight hospitals.

These agreements stress strategic aspects such as sustainability, healthcare activity and quality and organizational improvement.

The management agreements incorporate a new section linked to the programme contract of CatSalut

The management agreements are a key element in the transmission of the company strategy at the most operative level. Formulated as a contract between the ICS management board, the territorial management board and the production unit management, the agreement defines the fundamental strategic objectives, focusing on three lines: sustainability, healthcare activity and quality, and organisational improvement. The ICS has management agreements with each of the primary healthcare teams and paediatrics lines as well as with all eight hospitals.

In 2013, the EAP and hospital management agreements incorporated a section linked to the achievement of the targets of the variable part of the programme contract of CatSalut, an objective that aims to align the teams with the objectives of the Health Plan specified through the common and particular targets of the contract.



In the case of the EAPs, a new composite indicator has been incorporated that evaluates the quality of the diagnostic record in the primary healthcare medical history and a target linked to the improvement of case resolution in primary healthcare, measured as the quality and quantity of referrals to specialist healthcare. The organisational improvement has focused on the achievement of standards and indicators related with patient safety, which form part of the quality accreditation model of the Catalan Ministry of Health.

The results obtained by the EAPs in their management agreements have shown excellent financial performance, with a positive balance between income and expenditure at 98% among the EAPs and the achievement of the maximum achievable expenditure (DMA) in pharmacy invoicing at 45% of the EAPs. They have also reflected very good performance in the clinical and care targets, prominently including the achievement of the maximum goal of the healthcare quality standard (EQA) in 77% of the EAPs, of the maximum goal of the diagnostic quality standard (EQD) in 90% of the EAPs and of the maximum goal in the pharmaceutical prescription quality standard (EQPF) in 47% of the EAPs. As for organisational improvement, an excellent response has been obtained, with the achievement of the maximum goals for compliance with the *sine qua non* patient safety standards and related indicators in over 90% of the EAPs.

In the case of the hospitals, new incorporations in 2013 were the targets for the reduction in the management of hospitalisations in chronic patients and increase in surgical productivity to encourage a more surgical and efficient hospital profile. To avoid overlooking quality, it was accompanied with a target for the reduction of post-surgical septicaemia. Another new target aims to improve the management of outpatient dispensed hospital medication to encourage accessible care for patients. As for the accreditation target, all the ICS hospitals have passed it with excellent results and evaluations in excess of 90%.

► Healthcare innovations and improvements

Some 81.2% of the prescriptions made out by ICS hospitals are electronic

Eight of every ten prescriptions made out currently at hospitals managed by the ICS are now in electronic format. Thus, if in January of 2013, some 43.15% of prescriptions were made out in electronic format, in December of the same year the percentage reached 81.2%. Three of the hospitals (Germans Trias, Joan XXIII, and Verge de la Cinta) even amply exceeded 85% of electronic prescriptions. At primary healthcare centres, the electronic prescription has been generalised for some time, and in December it represented some 94.4% of the total prescriptions made out.

The progressive substitution of the traditional prescription on paper by the electronic prescription, which is set within the framework of Cat-Salut's Electronic Prescription Programme (rec@t), has become generalised thanks to the setting up, in the year 2012, of the electronic prescription module that the ICS developed to strengthen integration between healthcare services and improve security in drugs prescription.

The Vall d'Hebron University Hospital was the first to implement the module in all of its services in mid-June 2012. In parallel, all the other ICS hospitals (Josep Trueta, Germans Trias, Arnau de Vilanova, Verge de la Cinta, Viladecans, Joan XXIII and Bellvitge) have also progressively incorporated the electronic prescription.

The electronic prescription software that has been developed by the ICS is a shared work tool that will allow professionals working in family medicine, paediatrics and nursing, specialists, pharmacists and other healthcare professionals involved in the healthcare process of any person to access their medication plan, which is unique to that person, and interact with it. All this, with the security measures necessary to guarantee patient confidentiality and the proper use of the data.

This electronic prescription module, which has been integrated into the electronic case history, in primary, hospital and specialised healthcare alike, shows, in real time, information on the patient's medication plan in a global manner (medications being taken, dosage, treatment duration, etc.). It also detects possible interactions or incompatibilities between medications and allows the modification or withdrawal of a prescription. The module also offers a messenger service between professionals that enables the family doctor, for example, to consult with the specialist or send an alert to the pharmacy.

The most prominent new feature is that any change that is made to the patient's treatment is automatically recorded in his or her medical history. The clinical safety offered by the electronic prescription is especially important in the case of patients presenting with various simultaneous chronic conditions who take many drugs, since they may suffer complications and require frequent changes in their medication.

The electronic prescription module also helps ensure that patients follow the prescribed treatment correctly, thus facilitating the prevention of new health problems, and it strengthens the coordination between healthcare professionals through networking and continuing communication between healthcare levels. In summary, it represents a very important step towards people-focused healthcare management, improving healthcare quality and contributing towards the sustainability of the system through the rational and safe use of medications.

Until 31 December 2013, a total of 1,264,866 new prescriptions have been generated and, of those already prescribed, 229,217 have been withdrawn and 22,510 modified.

All hospitals and specialised healthcare centres managed by the Catalan Health Institute use the electronic prescription module.

This tool strengthens integration and coordination between healthcare levels and improves the clinical safety of patients by reducing possible errors in medication.



Primary healthcare professionals have a new clinical data manager for integrating all significant information on the patient and his or her health problems.

The ICS incorporates **Active Clinical Intelligence** into healthcare practice

The primary healthcare clinical workstation (ECAP) has incorporated an innovative clinical data manager: Active Clinical Intelligence. This is a tool that suggests, for each patient and health problem, the best healthcare options based on scientific evidence, presented in a logical and temporal order that adapts to good medical and nursing practice.

Through a navigation system that is easy and intuitive, Active Clinical Intelligence offers primary healthcare professionals a comprehensive view of the patient with data relating to their state of health, to the associated problems they suffer and the actions that need to be put into practice. The new system allows visualisation on a single screen all the information of interest to issue the diagnosis of a health problem taking into account all the current or past parameters that may intervene in the same. Thanks to this tool, the professional can provide a more personalised and safer service since he or she is in possession of all the relevant health information.

Active Clinical Intelligence gives more support also to the taking of decisions related with diagnosis, treatment and monitoring of pathologies. It also offers information on health programmes and standardised protocols, clinical alerts and activities pending such as, for example, pharmacological treatments, risk of decline in chronically ill patients or adaptation in the indication of diagnostic tests.

The data integration offered by this tool is a key factor in improving healthcare quality and attention to users. Furthermore, it allows the healthcare services to effect a more careful evaluation of the data and it holds great potential for research. In short, Active Clinical Intelligence represents the evolution of the ECAP from an illness-focused management tool to a patient-focused management tool.

Seven ICS hospitals manage **blood prescription and administration electronically**

Seven of the eight hospital centres of the ICS now manage blood prescription and administration electronically. This is an innovative initiative that allows professionals from any service to request the units of blood that they require and monitor the process by computer. The system is integrated into the SAP Healthcare Programme for managing clinical information and is available in all hospital services: outpatient consultations, emergencies, day hospitals, hospitalisation units, and surgical areas.



The launch of this initiative has been possible thanks to the integration of software of the Blood and Textiles Bank in SAP Healthcare applications and Gacela (used by nursing staff), which are used by all the hospitals of the ICS. The electronic management of blood bags allows optimisation of their use, improving the safety of the entire process — from the professional making the request to the patient receiving the transfusion — know the status of the request at all times and have access to exhaustive data referring to the reserves of this product, used daily at hospital centres.

The first hospitals to set up the system were Bellvitge and Germans Trias, in the last quarter of 2012. During the year 2013, the hospitals Arnau de Vilanova, Josep Trueta, Joan XXIII, Verge de la Cinta and Vall d'Hebron have joined them. The total calculation of electronic requests that have been made by these seven hospitals in 2013 stands at 59,415, a sum equivalent to 129,723 bags of blood processed. The Hospital of Viladecans will incorporate this system during the first quarter of 2014.

Tertiary hospitals of the ICS attend to 450 complex stroke cases since the creation of a single rota system

The setting up of a **single rota system shared** between the hospitals Vall d'Hebron, Bellvitge and Germans Trias, in the month of November 2012, has enabled the evaluation of 450 complex stroke cases, of which 238 were treated with catheterization. The tertiary centres of the ICS share specialist professionals who are on duty 24 hours a day, every day of the year, to be able to attend immediately to patients who are suspected to have suffered a cerebral infarction (ischemic stroke).

The three hospitals have semi-critical care units to be able to attend to cerebral vascular accidents and angiography rooms that allow ischemic strokes to be treated immediately with the insertion of catheters that allow the damaged brain arteries to be opened up and obstructions removed.

Thanks to this system, on every duty shift, there are two interventional neuroradiologists, and two neurologists who are experts in cerebral vascular diseases ready to attend patients with acute ischemic strokes at any of these three centres. The particularity of the service is that, if necessary, the professionals travel to wherever the patient is and provide him or her with highly specialised treatment, such as the catheter for thrombolysis of the brain arteries and the extraction of the clot, which is practiced on 15% of patients who suffer a cerebral infarction.

The electronic management of blood bags allows optimisation of their use, improvement of safety throughout the process and knowledge of the status of the request at any given time.

Vall d'Hebron, Bellvitge, and Germans Trias share professionals ensuring there are specialists on duty 24 hours a day.



The non-face-to-face consultation was launched in 2009 at the Hospital of Viladecans and subsequently it has been extended for non-complex interventions at the hospitals of Bellvitge, Vall d'Hebron, Arnau de Vilanova, Germans Trias, Joan XXIII and Verge de la Cinta.

During the year 2013 at these centres a total of 18,264 non-attendance pre-ops were carried out.

Together with high-specialisation centres, the rest of the ICS referral hospitals (Arnau de Vilanova, Josep Trueta, Joan XXIII, and Verge de la Cinta) have units that are reference points for close to thirty regional hospitals in their catchment areas and cover the healthcare needs of 70% of the population of Catalonia.

Furthermore, from the month of March 2013, these specialists work in coordination with the ICS referral hospitals and with the regional hospitals, both for the referral of patients and for assistance with the Teleictus service. This system has already allowed the assessment of a total of 464 patients via videoconference in order to decide the best therapeutic option.

The ICS extends non-face-to-face consultations to pre-ops

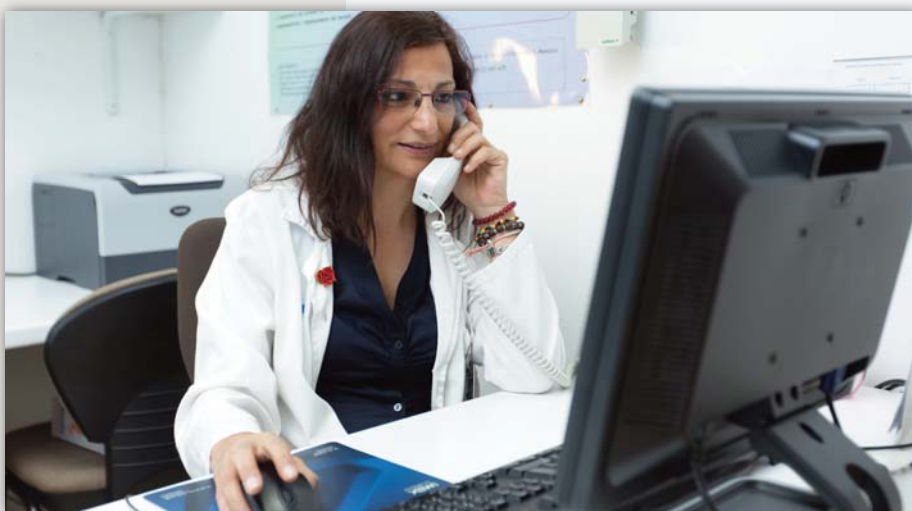
The ICS hospitals have now introduced the non-face-to-face consultation in pre-ops. This system allows the anaesthesiology services at the centres, through consultation of the medical history of each patient, to check whether the latter has already undergone any of the complementary tests necessary for the intervention, such as blood tests, x-rays, or electrocardiograms, for example. This enables avoidance of the repetition of tests and reduces the number of visits to the hospital, improving healthcare quality and patient comfort.

The non-face-to-face pre-op is carried out by nursing staff under the supervision of the team of anaesthesiologists of each hospital. Thus, based on certain defined action protocols, the service's nursing team analyses the need to practice complementary tests according to patient age, condition and the type of surgery he or she needs. The team subsequently evaluates whether the patient requires a face-to-face visit or if a telephone consultation will suffice.

From January to December 2013, the Hospital of Viladecans carried out 5,329 non-face-to-face pre-ops with 3,371 patients who underwent major outpatient surgery and 1,600 patients who underwent conventional non-urgent surgery. At the University Hospital of Bellvitge, a total of 5,710 non-face-to-face visits were carried out with patients who subsequently underwent operations, of which 1,636 correspond to visits made to patients operated for cataracts.

At the Outpatient Surgery Unit of the Vall d'Hebron University Hospital, situated in the Pere Virgili Health Park, a total of 6,516 non-face-to-face visits were made in this same period, a figure that represents nearly 76% of the pre-op visits carried out at the Unit. At the Germans Trias Hospital, the pre-anaesthesia consultation of the Major Outpatient Surgery Unit has effected 480 non-face-to-face visits since its system was launched on a regular basis, in the month of May. At the Joan XXIII Hospital in Tarragona, the non-face-to-face consultation entered into functioning in the

month of July and since then, a total of 200 visits of this type have been made. For its part, at the Verge de la Cinta Hospital, a total of 29 visits have been carried out.



ICS centres improve their care for chronically ill patients

Within the context of the strategic lines fixed by the **Health Plan 2011-2015**, which make care for patients with chronic illness one of the pillars of the healthcare system in the coming years, and in accordance with the targets set by the Programme for the Prevention and Care of Chronic Illness (PPAC) of the Catalan ministries of Health and of Social Welfare and Family, the ICS has developed during the year 2013 an entire series of initiatives to respond to the challenge represented by chronic illness and dependence.

These actions, developed in all the territories, are focused mainly on strengthening health promotion and prevention of risk factors and the chronic illnesses with the greatest impact by offering comprehensive care for patients, from the most incipient phases to the most complex stages, in collaboration with the rest of the healthcare and social care services in the area.

This care focus, which is proposed based on the stratification of the population into clinical risk groups and levels of severity, establishes as priority lines of work the complex chronic patient, alternatives to conventional hospitalisation, the 7x24 care model, home care, non-face-to-face care and therapeutic compliance.

The strategic objectives are:

- To prevent avoidable hospital admissions.
- To guarantee continuity of care through the integrated work of primary healthcare with referral hospitals for attention to the most prevalent illnesses, the collaborative work of the professionals with the territory's social care network and the adaptation of the organisation to the needs that are raised by the ageing of the population and the increase in chronic illnesses.
- Improve the quality of the patient's life and degree of autonomy and shared responsibility in managing the illness, making extensive the methodology of the **Catalonia Expert Patient Programme®** and working in each territory on the promotion of health and prevention of illness.
- Strengthen innovation and knowledge management favouring the implementation of new technologies (use of tablets for home care, telematic consultations, etc.), access to HC3 and the electronic prescription, among other measures, as well as the development of specific training actions in management by processes and promoting research.
- Continue progressing in a comprehensive healthcare model of quality for people admitted to geriatric homes through implementation of the GeriàtriICS project.

This is an integrational proposal for all the territory's social care resources, whose objective is to prevent avoidable hospital admissions with actions that imply healthcare coordination, an increase in the effectiveness of primary healthcare and the involvement of patients in the management of their illness.



The practical and individualised approach of patients is one of the key aspects in improving care for chronic illness.

Case management professionals coordinate all the services, both healthcare and social, which allows comprehensive attention to be devoted to each case.



Each patient has a shared individualised intervention plan that interrelates the information on his or her state of health, the medication taken and associated vulnerability factors.

The figure of the **case management nurse** is consolidated, for attending to complex chronic patients or those in a fragile situation

The ICS has consolidated case management at its centres, an initiative whose aim is to improve care for patients with a high degree of complexity. Case management is taken on by an advanced practice nurse who ensures that all resources that the complex patient needs are available.

The complex patient is considered to be a patient that, because of his or her health problems, age and circumstances, requires especially attentive care from healthcare professionals. Included within this group are chronic complex patients and high-complexity patients, who consume a large quantity of resources and usually present a high degree of dependence.

Case management professionals are usually nurses with experience and specific training that are integrated within primary healthcare teams. These professionals evaluate patients with processes of dependence, of high complexity or in a fragile situation, as well as their carers, employing questionnaires and other standardised evaluation methods.

At the ICS there are some 80 professionals involved in case management, integrated into different primary healthcare teams in the territory, whose functions are to guarantee continuity of care, rationalise healthcare resources avoiding the duplication of diagnostic tests and other dysfunctions, to promote the autonomy of patients and seek the most suitable social care resources to guarantee patients good quality of life.

The first case management professionals joined the Barcelona Primary Healthcare Area in the year 2006 and since then they have expanded to the rest of the primary healthcare teams of the ICS. However, in some teams, above all in rural areas, due to their population characteristics, the case management falls to the community nursing professional, who knows the population well and has good knowledge also of the social and healthcare resources available.

The **PIIC**, a tool that facilitates coordination between healthcare professional and mechanisms so that the **everyday life of the most complex chronic patients** is made **more comfortable**

The primary healthcare teams of the ICS have a new tool for improving care for complex chronic patients or those affected by advanced chronic illness. The ECAP has incorporated a health programme that makes it possible for each patient to have a Shared Individualised Intervention Plan (PIIC) which interrelates the information on their state of health, the medication they are taking and vulnerability factors associated to them through an evaluation of their cognitive, nutritional, emotional, motor and social situation. The plan also allows the patient to leave an advance care directive in the case of worsening of their illness or any decompensations they may suffer.

In this programme, the family medicine, nursing and case management professionals, who have a global knowledge of the patient and are responsible for the same, share information contained in the plan with professionals from other facilities and care levels who also intervene in their care. It must be pointed out that the PIIC is dynamic, therefore it is up-

dated every time a healthcare professional carries out an intervention with the patient.

The final objective is to adjust actions to the real needs of the patient to help to reduce any suffering. Thus, apart from the different chronic illnesses affecting the patient, other factors are taken into account (such as, for example, whether the patient suffers from depression or dementia, lives alone or accompanied, eats adequately or moves with a certain degree of autonomy) which condition their quality of life to a great extent.

Thus, the ECAP facilitates the detection of these patients affected by multimorbidity and fragility to improve coordination between the different healthcare professionals that attend them. All this makes possible more attentive monitoring so that their daily life is more comfortable.

In developed countries, between 3% and 4% of the population suffers a complex chronic illness, in other words, presents different chronic conditions concurrently, or alternatively an illness (heart failure, chronic obstructive pulmonary disease, chronic kidney failure, dementia, schizophrenia or depression, among others) that can cause the patient the insufficiency or total failure of an organ or body system. Within this collective, between 1.2% and 1.4% of those affected are to be found in an advanced phase of the illness that requires a great deal of attention.



The *express request* saves ICS family doctors around 90% of the clicks that they carry out when asking for tests for a patient.

This new application, which forms part of the Active Clinical Intelligence system, greatly simplifies the work of family doctors, paediatricians, and nurses, which permits a considerable reduction in the time that they devote to requesting a complementary test, blood tests, or a new appointment for the patient they are visiting. In fact, this new tool enables a reduction of up to 90% of the clicks that staff effect when entering information into the computer during an appointment, as all requests can be managed from a single screen. This also has an impact in terms of improving patient service.

The express request allows the healthcare professional, from a single screen, to request diagnostic tests (with the possibility of linking them to the health problems suffered by the patient), produce an appointments plan, and define flows in those that involve several professionals and services. In this way, the patient emerges from the appointment with a plan in which all the requests made by the healthcare professional are reflected.

The objective is to reduce the suffering of these patients, taking into account not only their illnesses but also all those aspects that may condition their quality of life.

The express request is structured based on each patient, rather than doing it by procedure.

In the pilot test, 150 patients are participating from the Josep Trueta Hospital and the EAP Montilivi in Girona, the Bellvitge Hospital, and EAP El Prat, el Hospital Germans Trias and the EAP El Masnou, and the Hospital Verge de la Cinta and the EAPs of Tortosa and Ulldecona.

Self-monitoring at home of oral anticoagulant treatment reduces face-to-face consultations by over 60%.

Four ICS hospitals and four primary healthcare centres have begun a pilot test designed to train patients who take oral anticoagulant treatment (OAT) and give them the tools necessary for independent self-monitoring of medication. The pilot test has a planned duration of one year.

Each of them has been given a coagulometer so that they can take control readings regularly at home, which saves time, travel and appointments both at the hospital and at the primary healthcare centre concerned. Thanks to this initiative, which prioritises the comfort and quality of life of patients and their families, these patients will reduce the number of check-up visits they require from 12 down to 4.

OAT is a treatment indicated in patients affected by illnesses that favour the formation of blood clots such as, for example, auricular fibrillation, a cardiac arrhythmia that causes tachycardia and favours the formation of clots that can lead to strokes. Between 1% and 2% of the population follows a treatment of this type. It is calculated that half of the people who take this medication could do their controls themselves. In addition to evident improvements in patients' quality of life, different tests carried out previously reveal that people who do their monitoring at home present fewer complications involving haemorrhages and thromboses. Currently, the ICS attends to some 75,000 people taking this type of medication.

Diabetic patients who are blind can now measure their blood glucose levels using a glucose meter with voice incorporated

The ICS has committed in 2013 to facilitating instruments that improve the autonomy of diabetic patients who are blind. For this purpose, it has made available to its primary healthcare centres 162 glucose meters with incorporated voice, which allows diabetic patients suffering from blindness or significant low vision to check their own glucose readings.

The glucose meters designed for blind people incorporate a voice synthesiser that notifies glucose levels, as well as the levels reached in the most recent readings. Consequently, the patient does not need the help of third parties to check their glucose levels and subsequently self-administer their insulin. The professionals entrusted with their monitoring receive specific training on the functioning of the device. The project has been developed in collaboration with the ONCE in Catalonia.

ICS primary healthcare teams incorporate ultrasound machines for family medicine consultations

A total of 57 primary healthcare centres now have an ultrasound specialist to allow the primary healthcare teams to improve their diagnostic capacity in low-complexity processes. This service gives cover to more than a million users over the entire territory of Catalonia.

To be able to use the ultrasound machines, 126 family doctors as well as paediatricians have followed a specific regulated training course and application of ultrasound scans at the primary healthcare level, in order to improve the diagnostic capacity in the more habitual cases that present



at patient appointments, especially, abdominal and renal conditions. In case of doubt, the primary healthcare professionals can carry out a virtual consultation with the radiologist or any other specialist.

The incorporation of ultrasound machines into the primary healthcare network, which will gradually be expanded, responds to the targets set by the 2012-2015 Catalonia Health Plan, since it affords this healthcare level a 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. Finally, it allows greater professional development for family doctors through the learning of a new diagnostic technique, as well as an improvement in the efficiency of radiologists' time, which can be allocated to more specific and complex tests.

The Barcelona Esquerra Comprehensive Paediatric Care Centre (CAPIBE) starts up

The CAPIBE is an innovative centre that offers comprehensive paediatric care including primary healthcare and low-complexity emergency care (from 8 a.m. to 10 p.m., 365 days per year) and specialities. This is a new organisational model that allows a better healthcare response to be given to the needs of the children and young people in the neighbourhoods of Les Corts, Sants-Montjuïc, Sarrià-Sant Gervasi and Esquerra de l'Eixample. It is structured into three units:

- Primary Healthcare Paediatrics Unit, which has a total of 15 paediatricians, 13 paediatric nurses, six management and services staff, a clinical auxiliary and a social worker.
- Emergency Paediatrics Care Unit, managed by the Sant Joan de Déu Hospital. This has a triage room, five emergency bays, a recovery room, a small observation room, a laboratory, and simple radiology. This is a paediatric CUAP that can attend to any health problem and refers more complex cases directly to Sant Joan de Déu Hospital, where the evaluation and priority assigned from the CUAP is maintained.
- Specialised Paediatrics Unit, which offers attention in allergy/immunology, endocrinology, cardiology, nephrology, ophthalmology, neurology, tele dermatology, traumatology, ear, nose and throat, gastroenterology and general surgery.

The project is the result of collaboration between the ICS Barcelona City Primary Healthcare Area, the Sant Joan de Déu Hospital and the Eixample Primary Healthcare Consortium (CAPSE). By agreement between the three institutions, the centre's management corresponds to an ICS paediatrician.



Costa de Ponent primary healthcare reorganises emergency care in Alt Penedès and Garraf

During the year 2013, a process has been carried out of reorganisation of healthcare provision in Vilafranca del Penedès on Saturdays and holidays, in order to adapt the offer to the territory's needs. The attention offered in daytime hours on Saturdays, Sundays and bank holidays has been optimised, and resources have been unified at a single point situated at the Alt Penedès Regional Hospital. Home care has also been unified for the entire Alt Penedès, with the extension and strengthening of home care management via the 061 CatSalut Respon helpline on Saturdays, Sundays and bank holidays throughout the Alt Penedès.

In the town of Vilanova i la Geltrú, the care offered at the CAP Sant Joan during daytime hours on Saturdays has been concentrated into a single care point at the Sant Antoni Abat Hospital. The organization of emergency care is proposed to continue strengthening telephone services in order to avoid people having to travel.

The Bages launches a new tele-audiometry service

The Bages region has introduced a new tele-audiometry service that allows family doctors to consult an ear, nose and throat (ENT) specialist electronically at the referral hospital without the need for the patient to be present.

Thus, when a patient with problems related to deafness, vertigo or tinnitus takes a hearing test at the CAP, the results of the test are recorded, together with a description of their clinical problem, in the computerised medical history (ECAP). Next, an electronic consultation is programmed between the family doctor and the ENT specialist who, through the same workstation, responds to the consultation with recommendations on treatment and monitoring.

As with the rest of the telemedicine services introduced in the territory, the project aims to reduce waiting lists, in this case the ENT service, optimise healthcare resources and avoid unnecessary travel for users of the hospital in a region that is marked by great geographical dispersion.

Pharmacies and primary healthcare teams of the ICS in the Vallès Occidental coordinate to control the population's blood pressure

A total of 79 pharmacies in Cerdanyola del Vallès, Ripollet, Sabadell, Sant Quirze del Vallès, Montcada i Reixac and Terrassa (Can Parellada) and 17 primary healthcare teams are working together so that the blood pressure checks that users undergo at pharmacies reach, safely and confidentially, and by electronic means, the healthcare centre and are incorporated into the medical history.

Various studies confirm that the checking of blood pressure carried out at pharmacies is as useful and reliable as that carried out at healthcare centres. With this initiative, which emerged in 2012, ICS healthcare professionals can consult and evaluate the information obtained in a secure way from the pharmacy without the need to make the user travel to the healthcare centre. The confidentiality of the information collected is guaranteed via the individual health card. When the patient gives the card to the pharmacist, this means authorisation to update in the patient's medical history the blood pressure data recorded at the pharmacy.

To be able to coordinate with each other, the professionals of the 79 pharmacies and the 17 primary healthcare teams involved have carried out joint training, and have a common protocol for the monitoring of blood pressure and have established a single and reliable register. Furthermore, the pharmacies have had to acquire approved devices for taking blood pressure. In 2013, a total of 4,095 blood pressure recordings have been taken and incorporated into the person's computerised medical history in each case.



Primary healthcare in Lleida uses carotid ultrasonography as a tool for screening in cardiovascular risk stratification

Nursing consultations at the primary healthcare centres of Capponet and Borges Blanques have developed an innovative project that allows cardiovascular risk (CVR) to be reclassified in an apparently healthy population and to individualise the plan for intervention in the control of cardiovascular risk.

Therefore, based on the stratification of CVR in the population aged 45 to 65 years who are obese, smokers, with hypertension and dyslipidaemia, the nursing services carry out a carotid scan, a non-invasive and easy-to-manage test whose aim is the early diagnosis of subclinical arterial disease in the asymptomatic population with cardiovascular risk factors. The results show that some 44% of the apparently healthy population with CVR factors who have taken the test present atheroma plaques in their arteries. They will then require the defining of the objectives of any hygiene, dietary and pharmacological measures and application of an individualised treatment plan for patients.

In the year 2013, after having carried out a total of 239 scans in primary healthcare, work has been done in coordination with the Unit for the Detection and Treatment of Atherothrombotic Diseases (UDETMA) and the Neurology Service of the Arnau de Vilanova Hospital to identify the degree of stenosis of the supra-aortic trunk.

The Sala Cellex, a pioneering facility for the multi-disciplinary treatment of complex cardiopathies

The Vall d'Hebron University Hospital has set up an innovative hybrid room for the treatment of complex cardiac processes. The **Sala Cellex**, which functions as an operating theatre and a haemodynamics unit, allows a simultaneous and multi-disciplinary approach to the treatment of complex cardiac lesions such as the endovascular implant of aortic valves, the repair of aortic valves, the repair of heart valves and the correction of congenital defects in children and adults without the need for open surgery.

In this unit, minimally invasive cardiac interventions are carried out with a much lower risk of complications and post-operatively for patients, thanks to the combination of a powerful imaging system integrated into a surgical setting and the collaboration of the different specialists involved. This type of procedures can now be the only possibility for patients, adults and children alike, for whom conventional surgery represents a very high risk.

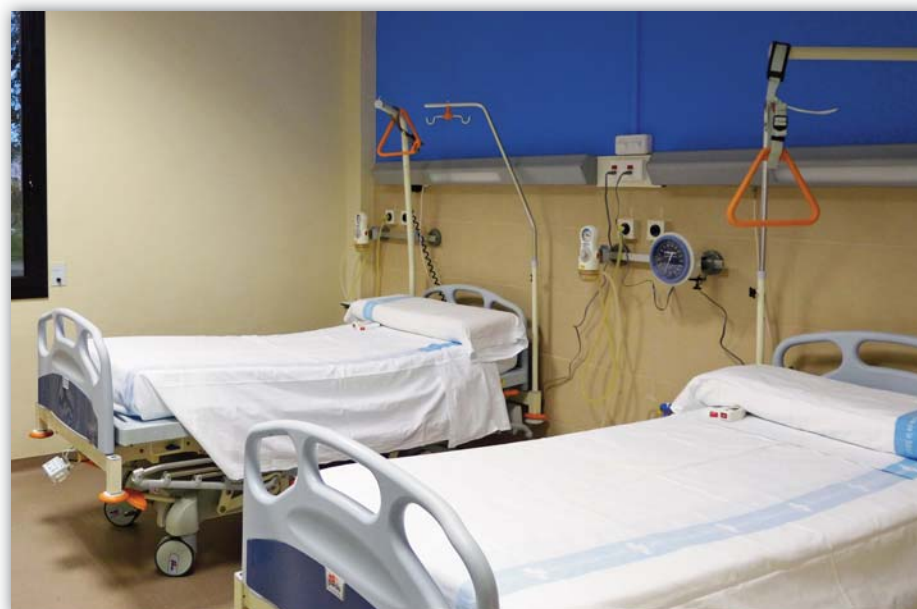
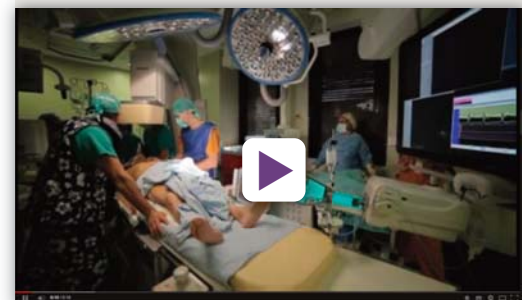
The Sala Cellex, the first in Spain with these characteristics, is a donation from the Fundación Cellex within its programme of support for technological innovation.

Vall d'Hebron reinforces and improves its General Emergencies service

In 2013, Vall d'Hebron Hospital has launched different measures in the General Area Emergencies service in order to improve the comfort of patients and their level of satisfaction with it.

One of the most important has been the expansion from 30 to 60 beds in the Observation Area, converted into a hospitalization unit where patients are taken who, once attended, have to wait to be transferred to a hospitalisation ward or referred to another centre. With this measure, which has meant an investment of 350,000 euros, patients and family members avoid waits in corridors in periods with a greater affluence of users.

An area has also been conditioned for consultations for minor emergencies, in other words, those that do not suppose any risk to life, with which



Each year, the General Area Emergencies Service attends to 100,000 patients with a very high degree of complexity.

The Alt Pirineu and Aran ICS and the Pallars Hospital introduce a home hospitalisation protocol for complex chronic patients

The primary healthcare teams of Tremp, La Pobla de Segur, and Pallars Sobirà, with the support of the PADES of the Pallars Regional Hospital, have launched the protocol for the home hospitalisation of complex chronic patients of Alt Pirineu and Aran.

Thanks to this new protocol, when a patient arrives at the Hospital emergency department and is identified as a complex chronic patient, the internal medicine specialist carries out an assessment and decides whether, in accordance with the type of conditions that the patient suffers and their family situation, they may receive treatment at home. Once stabilised, from the Hospital they contact the patient's primary healthcare team and the PADES in order to activate home hospitalisation and coordinate all the services involved.

The main objectives of this protocol are offering comprehensive care for complex chronic patients, avoiding readmissions into hospital, improving their quality of life and degree of autonomy, and making them co-responsible in the management and treatment of their illness.



the medical care for patients according to the degree of severity that they present when they arrive at the Service can be prioritised in the most adequate way.

To improve patient flow, two emergency care managers have been incorporated and are entrusted with controlling patient flows within the Emergencies Service, speeding up admissions to hospital wards and coordinating referral to other centres, where this is necessary. Improvements have also been made to the coordination with emergency services in the territory, both primary healthcare and specialist care, and agreements have been reached with the Pere Virgili Healthcare Park and with the Sant Rafael Hospital to increase the number of beds available at Vall d'Hebron during periods of greater healthcare demand.

Finally, organizational measures have been applied to improve the response time and case resolution capacities of the Emergencies Service (laboratories have results in 45 minutes and radiology also guarantees a response in one hour), plus measures to speed up discharges from General Area hospitalization before noon in order to facilitate the admission of patients and reduce stays in Emergencies. Furthermore, the Andorran Triage Model (MAT), which was launched at the start of the year, means that the reception, registration in admissions and classification of patients can be carried out in an average of 15 minutes.

Bellvitge Hospital creates new functional units

The functional non-oncological units require the participation of professionals from different services devoted to the diagnosis and treatment of a healthcare process. They are cross-disciplinary teams formed by medicine, nursing, and management professionals with shared, clearly defined objectives that stimulate, encourage, and continually improve healthcare.

The **Systemic Autoimmune Disorders Functional Unit** is oriented towards the multidisciplinary care of patients with disorders that have an autoimmune base that affects various organs and systems. The Unit integrates, in a coordinated team, professionals involved in decision-making on the diagnosis and treatment of these patients (internal medicine specialists, nephrologists, rheumatologists, nursing professionals and administrative staff) with the aim of offering the best therapeutic strategy.

The **Diabetic Foot Functional Unit** has a consulting room with two bays where, working in a multidisciplinary manner, there are professionals from the medical specialties involved, a surgical specialist, and a nursing diploma holder. These professionals work in the same module to guarantee multidisciplinary attention and they also receive the support of the rest of the specialties involved, such as podiatry, home hospitalisation, and radio-diagnosis. They also coordinate with professional staff of the emergencies service, hospitalisation, and primary healthcare.

The Primary Adult Immunodeficiencies Functional Unit is made up of professionals and specialists in internal medicine, pulmonology, infectious diseases, and immunology, and graduates in Pharmacy. It is characterised by dynamic organisation and offers shared and coordinated care, with a single entrance and a therapeutic and diagnostic committee that takes decisions jointly. Care is provided through outpatient consultations, at the same time and in the same space.

The **Multidisciplinary Familial Amyloidosis Unit** offers a specific consulting room for specialists in neurology, cardiology, and gastroenterology, with appointments attended jointly. The specific consultations of other consulting members are organized for the same day as the rest of

the appointments and complementary examinations. Currently, at Bellvitge University Hospital over one hundred patients who meet criteria for being visited at this Unit are being controlled.

Germans Trias becomes a full-fledged tertiary hospital after 30 years of intense work

Three decades following its opening, the Germans Trias i Pujol Hospital became consolidated in 2013 as a tertiary and high-complexity centre in all medical and surgical spheres for the residents of the Barcelonès Nord and Maresme regions. In some specialities, it is also the referral hospital for patients from beyond the Metropolitana Nord area of Barcelona.

In this sense, the Germans Trias has contributed decisively to reducing the cardiac waiting list in Catalonia, by operating on some fifty patients from outside the Hospital's catchment area within the framework of the action plan designed by the ICS in the second half of 2013. The excellent work of the Cardiac Surgery Service, which operates on some five hundred patients a year, has allowed this increase in activity to be taken on board with barely any increase in the waiting time for patients, which is about three months.

Moreover, the Hospital has been recognised by CatSalut as a referral centre for surgery for Parkinson's and epilepsy, and in 2013 it practised over 20 of these surgical interventions, to which should be added some 15 skull base surgeries and 13 high complexity procedures in the neurovascular sphere.

Furthermore, a programme for attention to rare diseases of a markedly multidisciplinary nature has been launched, and has positioned the Germans Trias as one of the reference points in this area in Catalonia. In addition, following the same lines as in recent years, the Hospital has continued actively encouraging living-donor kidney transplants, with 18 such interventions.

The HJ23 successfully treats a newborn child with a congenital cleft sternum

The Paediatrics Service of the Joan XXIII University Hospital of Tarragona, in coordination with the services of Neonatology and Anaesthesia at the same centre, has carried out a complex thoracic surgery intervention consisting of the closure of the sternum of a newborn baby with a congenital cleft sternum. The baby was referred to the Joan XXIII on its first day of life from another hospital centre, after physical examination detected a significant thoracic malformation, characterised by a wide thorax, widely spaced nipples, partial agenesis of the sternum and cutaneous aplasia.

With a diagnosis of congenital cleft sternum without other significant associated malformations, it was decided to carry out early surgical correction at age 14 days, thus achieving a complete direct closure without the need for prosthetic material and with an important improvement in the child's respiratory parameters.

Isolated cleft sternum has a very low incidence, with only around 100 cases described in medical literature worldwide. Congenital abnormalities of the sternum include a broad range of malformations, associated according to each case with cardiopathies, cutaneous lesions, cerebral vascular lesions and other defects of the corporal midline closure. Surgical correction is always indicated in order to protect the heart and the major vessels from a possible lesion before any minimum trauma, improve respiratory dynamics, and recover a good aesthetic appearance.

The Hospital of Viladecans launches its surgical process and Operating Theatre Committee

Within the framework of the organisational change designed to improve the quality of the healthcare being provided at the Hospital of Viladecans, in the year 2013 the surgical process was launched. Its objective is the organization of surgical activity and the interrelation of healthcare services that intervene in the same. The surgical process joins the emergencies process and the invoicing process which have already been introduced.

To coordinate it, the Operating Theatre Committee has been set up, formed by representatives of the Care Management, the Admissions Service and medical and nursing professionals.

Organisation by processes represents a substantial change in the way of working. A change based on significant involvement of professionals and the capacity of the same to introduce the idea of continuous improvement into healthcare, always from a user-centred focus. This comprehensive approach involves the analysis of all actions throughout the entire process, from the patient asking for assistance until this is completed.

The Eixample Primary Health Care Consortium increases its range of services

During the year 2013, the primary healthcare teams of Les Corts, Casanova, and Comte Borrell that form the CAPSE have incorporated new services, such as low-complexity ultrasound scanning and teledermatology, which have allowed them to increase their case resolution capacity. They have also progressed with the specialist consultations model and have participated actively in the clinical work groups of the Barcelona Esquerra Integrated Health Area.

The Josep Trueta Hospital Coronary Unit is equipped with a computer system to monitor the vital signs of patients automatically

The Coronary Unit (UCO) of the Doctor Josep Trueta University Hospital of Girona has been equipped with the Centricity computer program, with which the monitoring of vital signs of patients (blood pressure, haemodynamics, breathing etc.) is carried out automatically and is directly recorded in the patient's medical record. With the implementation of this technology, all communications (both data collected from patients and those related to nursing care or to medical prescription) are carried out via a computer program, which represents a very important advance since it minimizes the possibility of errors and makes the information more precise and ordered.

The cardiology ward, which was renovated during the summer, is equipped with 20 conventional beds, plus four semi-critical beds and the Coronary Unit itself is also located there, with capacity for eight patients in a critical situation. Another of the improvements has been the incorporation of telemetry into the ward, which allows the electrocardiographic control of eight patients from an area where the nursing staff conduct monitoring.

These actions will allow improvements in the care of the more than 1,100 patients in the entire Girona region who attend the Cardiology Service each year, of whom 825 are admitted to the Coronary Unit in a high-risk situation, with advanced life support measures.

The Castelldefels Health Agents Consortium improves case resolution and accessibility

With the aim of responding to the specific needs of the population of Can Bou and the entire town of Castelldefels, the CASAP has produced a new edition of the nursing intervention guides for health problems in adults and also in children. The latter is framed within a process of change of the paediatrics care circuits in which the nursing staff assume the large part of the activity of the Programme of Health Promotion and Prevention among Paediatrics age groups, while paediatricians intervene in those situations of greater complexity.

Moreover, the Minor Surgery Service of Can Bou has incorporated the use of dermatoscopy into family medicine consultations, which provide the service to the entire municipality.

As regards the CUAP Castelldefels, the list of diagnostic tests offered has been complemented with the incorporation of arterial gasometry and D-dimer testing.



►Quality

Patient safety functional units deployed at the EAPs

The strategy for implementing a patient safety culture in the primary healthcare network of the ICS has been carried out through the patient safety functional units (UFSP) promoted by the Catalan Health Ministry, which continued with their deployment in the primary healthcare teams of the ICS during the year 2013.

Among the actions carried out, prominent was the incorporation into EAP management agreements of the reassessment of 33 *sine qua non* standards and the assessment of seven patient safety indicators, based on the MADS (Health Ministry Accreditation Model) tool.

These indicators and the standards for obliged compliance allow evaluation of the degree of implementation of the quality plans and patient safety programmes of the teams, with which it has been possible to update, revise and improve the processes and procedures in order to incorporate safer practices for both patients and professionals alike.

Thanks to the work of these units, the *Manual per a l'abordatge de la seguretat dels pacients en l'atenció primària de l'ICS al Camp de Tarragona-Terres de l'Ebre* (Manual for Approaching Patient Safety at ICS primary healthcare centres in Camp de Tarragona-Terres de l'Ebre) was developed. This project, which is in the pilot phase, allows professionals to have those processes worked on defined in a precise way, with the detection of incidents and an automated alert when detected. The entire process can be followed systematically up to the analysis and resolution of the problem.

The deployment of the UFSP is intended to culminate with the implementation of the Adverse Events Notification System (TPSC Cloud) at all EAPs. During the year 2013, the EAPs of Camp de Tarragona have begun the pilot test with the TPSC Cloud tool for the notification of events or circumstances that have caused or may cause unnecessary harm to patients, such as errors in medication, communication, the diagnostic process, etc., under the guidance of the Catalan Ministry of Health.

The eight ICS hospitals have also implemented the UFSP and since 2013, now have at their disposal a new TPSC Cloud notification system for incidents related with patient safety.



The EAPs of the Camp de Tarragona have begun pilot testing of an adverse events notification system.

Bellvitge, Germans Trias, Arnau de Vilanova and Verge de la Cinta, Top 20 Hospitals 2013

The hospitals of Bellvitge, Germans Trias, Arnau de Vilanova, and Verge de la Cinta, managed by the ICS, all received **TOP 20** awards which each year are presented by health-care services consultants Iasist. This distinction places value on the quality of management and care of the participating centres, grouped into different categories.

The University Hospitals of Bellvitge and Germans Trias i Pujol have been awarded the Global Hospital Management Award within the category of Major Referral Hospitals. The Hospital Arnau de Vilanova in Lleida has received a distinction for its Global Hospital Management in the Hospitals category. The Verge de la Cinta Hospital in Tortosa merited the special award in the category of Medium-sized General Hospitals.

Accreditation results

Arnau de Vilanova University Hospital of Lleida	92.77%
Bellvitge University Hospital	93.50%
Germans Trias i Pujol University Hospital	95.50%
Joan XXIII University Hospital of Tarragona	98.54%
Doctor Josep Trueta University Hospital	94.81%
Vall d'Hebron University Hospital	97.27%
Verge de la Cinta Hospital	96.39%
Viladecans Hospital	97.52%

Diario Médico awards prizes for the three "best ideas" of the ICS

The specialist health and medicine publication *Diario Médico* awarded three prizes for The Best Ideas of 2013 to initiatives involving ICS professionals: the project for shared management between the ICS and public companies in Lleida, Girona and Tarragona, the creation of the **Clinical Research Support Unit** at the Vall d'Hebron University Hospital through VHIR, and a **study by the ICO and the HUB** that shows how a radiotherapy technique improves the prognosis for inoperable lung cancer. The awards were presented in November at the Teatre Nacional de Catalunya in Barcelona.

The ICS hospitals renew their quality accreditation with excellent qualifications

The accreditation of healthcare centres is the process by which a healthcare organisation is incorporated into an external validation system, which evaluates the level of the organisation with relation to a set of previously established quality standards. This accreditation determines the recognition of a level of quality and competence higher than the standards demanded for the administrative authorisation of a healthcare centre.

The current acute-care hospitals model is based on the Model of Excellence of the European Foundation for Quality Management (EFQM) and includes the evaluation of 696 standards considered essential. To achieve the accreditation it is necessary for the hospital to meet, at least, 65% of the essential standards. In this process, each centre carries out an internal self-evaluation of the standards defined and, subsequently, an independent external organisation authorised by the Catalan Health Ministry carries out an external assessment in which it audits the organisation with respect to the set of established standards, through visits to the different healthcare and non-healthcare units and interviews with staff.

At the ICS hospitals, internal self-assessment and subsequent external assessment have been carried out progressively between the last quarter of 2012 and the whole of 2013 and have included the participation and involvement of all staff at the centres. Finally, from December 2013, the Catalan Health Ministry's General Board for Healthcare Organisation and Regulation issued the definitive resolutions that award accreditations to the centres, with excellent scores that exceed 92% of the essential standards. In line with these scores, the hospitals received their favourable Accreditation Certificate which has a validity of three years.

For the ICS hospitals, the accreditation process represents recognition of their high level of quality and competence, as well as being an effective tool that offers a progressive and target-based continuous improvement in the quality of the services offered to patients.

The ICS implements the computerised surgical checklist

Since the month of June, the hospitals of the ICS have a new tool at the service of patient safety, the computerised surgical checklist, an instrument with international recognition that helps to reduce the morbidity and mortality associated with surgical interventions. The World Health Organisation, and in Catalonia, the Health Ministry's Alliance for Patient Safety, are advocating its implementation at all centres with surgical activity.



The majority of ICS hospitals had implemented the surgical checklist in paper format, but now the centres have access to this tool in electronic format, integrated into the Clinical Workstation, which will facilitate the exploitation of data, the return of information to professionals and the possibility of effecting improvements based on results and preventing potential errors.

The computerised surgical checklist - also known as the surgical safety checklist - favours communication between surgical team members, reduces errors in surgical procedures, and is a widely extended safe practice at hospitals worldwide.

The Montornès/Montmeló Primary Healthcare Team again obtains the best score for its Standard of Healthcare Quality

The EAP Montornès-Montmeló has obtained, for the second year running, the highest EQA score, with a total of 913 points out of the 1,000 possible. It is followed by the EAP Caldes de Montbui (889), the EAP Sabadell Nord (875), the EAP Concòrdia I Sabadell (860), the EAP Cardedeu (859), the EAP Vall del Tenes (857), the EAP Maria Bernades I Viladecans (856), the EAP Ca n'Oriac I Sabadell (849), the EAP Sant Quirze de Besora (841) and the EAP Mollet del Vallès Est (838).

The ICS Activity Reports receive an award from the Fundación Avedis Donabedian

The Fundación Avedis Donabedian has awarded the Dr. Ignasi Aragó Mitjans Prize for the best healthcare and social institution report to the ICS for the set of activity reports for its centres for the year 2012. The Foundation highlighted the capacity to collect the most important information from the healthcare and support processes, from the areas of innovation and from research and teaching. It also placed value on the publication of information on corporate social responsibility and financial management. The prize was presented during the Catalan Healthcare New Year's Concert, which was held at the Palau de la Música.



In a strategic commitment to reinforcing the institutional image, harmonising contents, and facilitating the understanding of the information they contain, since 2008 the ICS has published the reports for its centres jointly. Furthermore, since 2010, these reports are published in digital format only and can be consulted via both the websites of the centres and from mobile devices. This coordination effort made by the institution allows all the activity being carried out to be presented in a coherent, ordered, intelligible and sustainable way.



The jury considered that both the corporate activity report and the reports of a territorial scope meet the objective of informing different audiences of interest regarding the healthcare, teaching, research and management activity carried out by the ICS.

The Vall d'Hebron Paediatric Oncology and Haematology Service wins the Best in Class award

This **award** offers recognition to the Service's healthcare quality and positions it among the best healthcare services in the whole of Spain.



The ICS reports show in detail the structural resources and the healthcare activity carried out at the organisation's centres. They additionally contain data on the morbidity of the population served by primary healthcare, the most important chronic illnesses by age and gender, the qualitative results obtained by primary healthcare, the most frequent health conditions treated at hospitals and details on tertiary processes, as well as information on pharmaceutical prescriptions. They also offer information on the strategic projects initiated, the most significant news on healthcare innovation and improvements, the presence of the organisation online, quality, research, teaching, staff, citizens, corporate social responsibility, building work and facilities and financial management data.

The GeriàtrICS Project is awarded the Profesor Barea Prize 2013

The GeriàtrICS Project, whose aim is to guarantee from the public health area comprehensive and quality healthcare for people who live at geriatric centres, has been awarded the Profesor Barea Prize 2013, offered by the Fundación Signo in the Multi-organisation Projects category.



GeriàtrICS is a project offering support for chronic conditions and adaptation of prescriptions at geriatric residential centres that has been developed on the initiative of the primary healthcare teams of the ICS in the Metropolitana Nord area. It has been able to develop further thanks to joint work with the geriatric residences of

Barcelonès Nord, Maresme, Vallès Occidental and Vallès Oriental. GeriàtrICS began in the year 2012 and today 9,233 internal patients at 198 old people's homes in the territory are attended to by ICS and residence staff in an integrated way that is focused on their needs, with agreed treatment plans based on criteria of efficiency, safety, and effectiveness.

The ultimate aim of the project is to achieve greater speed in attention to relapses of health problems, improve treatment capacity for decompensation episodes, and further develop nursing skills. For this purpose, communication among primary healthcare staff and staff at residences has been strengthened, making it possible for staff at the latter to access connection points where they can consult medical records and favouring the training of nursing professionals.

The ICS promotes the use of biosafety needles and sharps at hospitals and primary healthcare centres

In an institutional commitment to the substitution of needles and sharp materials with biosafety alternatives, 2013 was a key year for the joint tackling of this initiative from Purchasing Management, the Prevention Service and the Nursing and Laboratories management areas.

Consequently, all centres have now implemented the use of butterflies and lancets incorporating a safety mechanism, while nearly 90% of hospitals and 60% of primary healthcare centres use safety peripheral intravascular catheters. As regards material for vacuum blood extraction, this has been implemented at all the hospitals and at 69% of primary healthcare centres. These figures have doubled with respect to consumption in 2012, which were 27% and 34%, respectively.

► Research

In the year 2013, ICS researchers published more than 3,000 articles in scientific journals, which add up to a total impact factor of 13,776 points

The ICS carries out considerable scientific activity through seven healthcare research institutes that are integrated into the organization's hospitals and primary healthcare centres: the Vall d'Hebron Research Institute (VHIR); the Bellvitge Biomedical Research Institute (IDIBELL), which manages the research carried out at the hospitals of Bellvitge and Viladecans; the Germans Trias i Pujol Health Sciences Research Institute (IGTP) in Badalona; the Biomedical Research Institute of (IRBLleida); the Pere Virgili Healthcare Research Institute (IISPV), which manages the research of the Joan XXIII Hospital in Tarragona and of the Verge de la Cinta Hospital in Tortosa, 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.

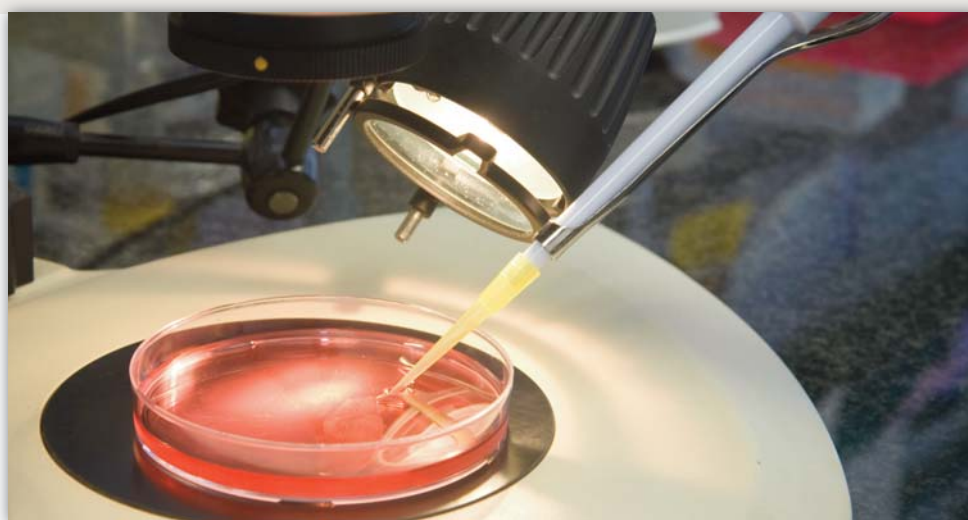
In total, working at the research centres linked to the ICS, are nearly 3,500 researchers, who participate in a thousand competitive projects. In total, they manage close to 130 million euros originating from the said projects and clinical trials. In the year 2013, ICS researchers published over 3,000 articles in scientific journals that add up to a total impact factor of 13,775.73 points, which makes the ICS the most significant healthcare institute in the whole of Spain in biomedical research activity.

Research, together with healthcare and teaching, is a strategic area for the ICS.

The researchers at the research centres linked to the ICS gear their work towards improving people's health.

Scientific production of the research institutes

	Articles published in indexed journals with impact factor	Total impact factor	Average impact factor	Current research projects and grants	Clinical trials underway	Applications for patents	R & D Contracts
VHIR	762	3,979.40	5.22	274	747	9	14
IDIBELL ¹	861	3,978.65	4.62	536	707	10	21
IGTP	501	2,329.90	4.65	96	252	3	22
IRBLleida	311	1,071.00	3.44	50	82	2	6
IISPV ²	236	1,000.00	4.24	51	137	3	16
IDIBGi	165	759.34	4.60	55	222	2	6
IDIAP	253	657.45	2.60	202	51	–	25
Total	3,089	13,775.73	4.20	1,264	2,198	29	110



Data supplied by the research institutes in June 2014. 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 the Verge de la Cinta Hospital in Tortosa.

The IDIAP continues with its research work

The Jordi Gol Institute for Research in Primary Healthcare (IDIAP) currently has 28 research groups (20 emerging and eight consolidated) active in several lines of research. It currently has nearly 254 live projects, of which 41 were begun in 2013. It has also consolidated the SIDIAP platform with 18 projects begun during 2013. Furthermore, from the Clinical Research in Primary Healthcare Management Agency, it participated in 18 clinical trials during 2013.

IDIAP researchers collaborated in a research project of the Network for Research into Preventive Activities and Health Promotion (redIAPP) led by the Autonomous Community of the Balearic Islands, which demonstrates that benzodiazepine doses in patients who are chronic consumers can be reduced. These are two educational interventions carried out from primary healthcare consultations that have managed to reduce the use of benzodiazepines in patients that consumed them by nearly 40%. Furthermore, the study shows that the main prescriber was the family medicine professional, thus, in the population under study, in some 78.7% of cases the prescription of benzodiazepines was commenced by this professional, while it was only commenced by a specialist in psychiatry in 10.1% of cases.



Given its importance, it is necessary to highlight also in 2013 the IDIAP's incorporation into the Spanish Clinical Research Network, (SCREN), a collaborative network financed by the ISCIII that is structured into 29 functional units from 11 different autonomous communities to provide support in independent research and prioritise multi-centre clinical trials. The IDIAP, the only primary healthcare institution in the whole of Spain that participates in it, forms part of the sub-programmes of regulation and monitoring and of pharmacovigilance.

The results have shown that variables such as obesity, being overweight and insulin resistance are very much linked to this disorder.

IDIAP researchers study non-alcoholic fatty liver disease

IDIAP Jordi Gol researchers have studied the factors associated with non-alcoholic fatty liver disease, a disorder that deteriorates the liver and that can trigger cirrhosis even if the patient does not consume alcohol. The study has been carried out in patients aged between 17 and 80 years who had no prior history of hepatic illness and did not consume alcohol (i.e., they did not consume more than 30 g/day in men, nor more than 20 g/day in women), but that presented fatty liver disease (steatohepatitis), detected on an abdominal ultrasound scan.

The results have shown that variables such as obesity, being overweight, or insulin resistance are very much linked to the presence of non-alcoholic fatty liver disease, with obesity, arterial hypertension, and diabetes being especially significant. It was also possible to observe that non-alcoholic fatty liver disease not only affects obese adults or diabetic women as previously thought, but that it can also occur in both sexes, both in adult and paediatric age groups, and that this is probably due to the increase in obesity in western societies.

Nursing professionals provide comparable care to that provided by family medicine professionals in resolving low-complexity conditions

A research study carried out by ICS primary healthcare professionals confirms that a nursing professional and a family medicine professional resolve minor health problems with the same level of quality. The research, financed by the Instituto Carlos III Healthcare Research Fund, is based on the analysis of 1,461 patients that visited the primary healthcare centre spontaneously for low-complexity problems such as minor burns, urine infections, or colds. One part of the users were tended randomly by nursing staff, duly trained for this task, and the other part by family medicine professionals. With the information from these consultations, the researchers measured the number of cases resolved by nursing staff, the remission of symptoms, and the degree of satisfaction of patients at the end of two weeks.

The research "Random clinical trial that compares the resolution of acute low-complexity conditions between nursing and family medicine professionals in primary healthcare", published in the *Journal of Advanced Nursing*, concluded that nurses resolved 86.3% of the cases successfully. The health problems that were resolved with the greatest ease were burns, cutaneous lesions, and acute diarrhoea, in a proportion higher than backache, urinary problems, and respiratory symptoms.

As for patient satisfaction, the results of the research found no differences between patients treated by one type of professional or another. Furthermore, when patients were asked regarding their preferences with respect to the type of professional they would like to consult if they had a similar health problem, over 40% said that the category of healthcare professional was indifferent to them.

The authors of the study remark that, if workloads represented by appointments due to minor problems are shared, it is possible to carry out more efficient demand management at primary healthcare centres.



The IDIBELL shows that three out of every four diverticulitis cases consulted as Emergencies can be treated at home

The study "Outpatient Versus Hospitalization Management for Uncomplicated Diverticulitis: A Prospective, Multicenter Randomized Clinical Trial (DIVER Trial)", published in the prestigious American scientific journal *Annals of Surgery*, shows that supervised home treatment of patients with acute diverticulitis of the colon represents a significant cost

The study was carried out in collaboration with the hospitals Vall d'Hebron in Barcelona, Josep Trueta in Girona, Virgen del Camino in Pamplona and the University Clinic in Valencia.

A research project at Viladecans Hospital on the treatment of anorectal pain obtains approval from the IESE and ACC10

The Viladecans Hospital Anaesthesia Service has led the C-LIFE project, which investigates the treatment of post-operative anorectal pain with gels. This was one of six research projects selected to be presented at the IESE Business School Entrepreneurial Tech Fair.

As a result of this dissemination, the project has been included in the Comertec programme which is promoted by the Generalitat of Catalonia's Company Competitiveness Agency (ACC10). The Comertec programme is working together with the researchers and the OTRI of the IDIBELL to facilitate and evaluate the transfer of these research results to enterprise.

saving for the healthcare system without impacting negatively on the quality of life of the people suffering from it.

The results of the study provide evidence that the outpatient treatment of acute, uncomplicated diverticulitis in patients who do not present comorbidities, a weakened immune system, cognitive, social or psychiatric deterioration, and are not taking orally-administered medications.

This multi-centre study, financed by the Healthcare Research Fund, included 132 patients aged over 18 years, with acute, uncomplicated diverticulitis. The project, coordinated by the head of service of General and Digestive Surgery at the Bellvitge University Hospital, was carried out with the collaboration of another four Spanish hospitals of recognised prestige in treatment of colorectal disorders.

The results of study make clear the need for a change in the protocol for treating this disease with the aim of improving effectiveness. Bellvitge University Hospital has already modified its action protocol for this kind of patient, reserving hospital admission only for cases of seriously ill patients.

A study coordinated by IDIBELL researchers has concluded that 55% of treatments for prosthetic joint infections achieve conservation of the implant

The Spanish Network for Research into Infectious Conditions (REIPI) published, several months ago, in *Clinical Infectious Diseases*, the broadest retrospective study conducted to date regarding prosthetic joint infections due to *Staphylococcus aureus* with implant conservation. The research was coordinated by the Infectious Diseases Service and the Osteoarticular Unit of Bellvitge University Hospital which, with the collaboration of 17 Spanish hospitals in the REIPI network, has managed to draw together 345 acute cases treated without requiring prosthesis substitution.

Of the 345 episodes studied (41% males, with an average age of 73 years), 81 were caused by Methicillin-resistant *Staphylococcus aureus* (MRSA). Antibiotics were used for an average of 93 days. In 45% of the episodes, an implant failure took place, often shortly after debridement. The average survival time was 1,257 days. There were no global differences in prognosis for cases caused by MRSA and by Methicillin-sensitive *S. aureus*, although a higher incidence of post-therapy treatment failure occurred in infections due to MRSA. Combinations based on rifampicin showed an independent protector effect.

The broad range of data that the study has provided will be extremely useful for specialists working in this medical area.

Researchers at Vall d'Hebron discover the causes of idiopathic pulmonary fibrosis

Researchers at the Vall d'Hebron University Hospital and the **Pulmonology Group of the Vall d'Hebron Research Institute** have shown that the causes of idiopathic pulmonary fibrosis can be shown in half of all cases, after carrying out an in-depth clinical study that includes an exhaustive and systematized questionnaire, the determination of antibodies against the causal substances, respiratory tests, cultures and environmental measurements in places frequented by patients (at home

and at work) in order to detect the antigens that can cause this serious disease.

This clinical study, published in *The Lancet Respiratory Medicine*, conducted with 60 outpatients of the Hospital's Pulmonology Service, opens up a new way forward in its diagnosis and treatment, as the identification of the causes allows prevention of the disease, thus avoiding it evolving towards advanced or severe phases.

The researchers discovered that one of the main causes of idiopathic pulmonary fibrosis is exposure to feather duvets and pillows, as well as to birds and fungi in minimal but persistent quantities. In short, this is the disease called chronic hypersensitivity pneumonitis, in which the Vall d'Hebron University Hospital is a worldwide authority.

The VHIR demonstrates the genetic load associated with psychiatric disorders

The **VHIR Research Group in Psychiatry, Mental Health, and Addictions** took part in the largest genetic study conducted to date in psychiatric disorders. The work, published in *Nature Genetics*, analysed the five most frequent psychiatric disorders with the greatest impact (personal and social): schizophrenia, bipolar disorder, major depression, attention deficit hyperactivity disorder (ADHD), and autism. It determined the genetic load of each of these disorders thanks to the large sample of individuals included in the study. In addition, one of the study's findings was that some of these pathologies share a genetic base.

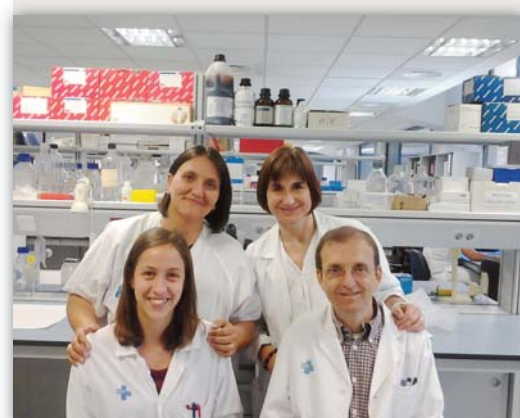
This work analysed jointly, for the first time, data from different studies of the Genome-Wide Association Study (GWAS) type in psychiatric disorders to determine whether there are common genetic factors in these disorders. To date, previous studies in samples of twins or family members had determined that a large genetic load existed in them within the context of kinship, but this study has allowed the inheritability associated with these disorders to be quantified directly and has done so in a sample of over 75,000 individuals. Genetic causes exist that can be attributed to chromosomal alterations or other variations, but this work has studied the inheritability associated only with single nucleotide polymorphisms of the DNA chain, i.e., small variations that consist solely of a fortuitous exchange of a single piece of the genetic map and that are the most frequent type of alteration.

The Germans Trias Diabetes Immunology Group manages to prevent the illness in mice with an autologous cell vaccine

The Germans Trias Diabetes Immunology Group has designed a new therapy that avoids, in mice that spontaneously suffer the disease, the appearance of diabetes type 1. This treatment, which acts like a vaccination, is based on the extraction from the organism of a type of immune system cells known as dendritic cells, and on their modification so that, when reintroduced, they prevent the destruction of insulin-producing cells. Even though it is necessary to expand the experiments, researchers point out that this strategy could be the basis for preventing diabetes and other diseases with an autoimmune cause in human beings. This advance was published in the month of May in the prestigious journal *PLOS ONE*.

This clinical study opens up a new path in the diagnosis and treatment of the illness, since the identification of its causes may allow it to be prevented and avoid it evolving towards advanced phases.

The study analysed the five most frequent psychiatric pathologies with the greatest personal and social impact.



The congress was attended by over a thousand of the main researchers in the field and over 500 studies were presented.

The AIDS Research Institute co-organizes the World Congress held in Barcelona

In the month of October, Barcelona hosted **AIDS Vaccine**, the most important and prestigious international congress on HIV vaccination in the world. Participating as an organizer was the HIVACAT Programme for HIV Vaccination Research, which is directed by the IrsiCaixa (located at the Germans Trias Hospital) and by IDIBAPS (Hospital Clínic). The congress was attended by over a thousand of the world's main researchers in this field, and some 500 studies were presented. HIVACAT also presented the state of research of its candidates for a vaccination and its participation in a trial to study the therapeutic aspect of a candidate for a preventive vaccination designed by the University of Oxford, which is being developed at the Clinical Research and Trials Unit at the Germans Trias Hospital.

In the year 2013, in addition to different advances made in the field of HIV (epidemiology, treatments, etc.) published by **IrsiCaixa** in prestigious scientific journals, another highlight was the publication of **a study** led by IrsiCaixa and the Germans Trias Institute that has allowed the identification, for the first time, of eight molecules that could serve to improve the diagnosis of myalgic encephalopathy / chronic fatigue syndrome (ME/CFS). The study was carried out in collaboration with the VHIR Chronic Fatigue Research Group and the CFS Clinic of Tarragona, as well as with the support of different associations of ME/CFS patients.



The hospitals Joan XXIII and Verge de la Cinta have become integrated into the IISPV Biobank

During the year 2013, the unification and integration took place of some of the cross-disciplinary support platforms of the Pere Virgili Healthcare Research Institute (IISPV), following the directives of the Strategic Plan for 2013-2015. One of the previously mentioned platforms was the IISPV Biobank, a unit specialising in the collection and storage of biological samples that guarantee maximum quality, with the objective of managing these samples for both researchers within the Institute itself and others from outside.

The IISPV Biobank has unified its management and coordination, maintaining a network structure and creating synergies between the different structures and strategic spheres of research of the Institute. The nodes that form part of the IISPV Biobank are the Joan XXIII University Hospital of Tarragona, the Verge de la Cinta Hospital of Tortosa, the Sant Joan University Hospital of Reus, and the Pere Mata Group.

The Lleida Biomedical Research Institute identifies the molecular mechanism of one of the most aggressive breast cancers among young women

A multidisciplinary study conducted by researchers at the Lleida Biomedical Research Institute (IRBILleida), the University of Lleida, and the Saint Louis University School of Medicine in the United States has described a molecular mechanism involved in triple-negative breast cancer (TNBC). TNBC presents with an incidence of 10-15% in young women. This type of cancer is considered as one of the most dangerous because of its high potential for metastasis and because it is insensitive to current treatments that are effective against breast cancer.

The research team has identified three biomarkers (cathepsin-L, 53BP1 and the Vitamin D receptor) related with malignancy of this type of cancer after analysing some 250 breast biopsies. These new biomarkers have to serve to improve the current clinical classification of different breast tumours and, at the same time, help specialists in the choice of the most suitable pharmacological treatment for each patient.

The study, co-funded with the Marta Santamaria Grant, was published in the *Journal of Cell Biology* and represents an important advance in this field. The biomarkers discovered will aid precision in the molecular diagnosis of NTBC tumours from the first biopsy and will allow the personalisation of pharmacological treatments, which will be increasingly more selective and suitable for patients that do not respond to habitual treatments.

The Verge de la Cinta Hospital leads a study on breast cancer with the participation of 10 national and foreign centres

The Oncological and Bioinformatics Group at the Verge de la Cinta Hospital of Tortosa (HTVC) is promoting the breast cancer research project titled "Automated analysis of biomarkers of the tumoural bio-environment in triple negative breast cancer without a pathological complete response to neoadjuvant treatment. Predictive factors for relapse".

The objective proposed is to find cellular and molecular markers of the tumoural microenvironment capable of predicting relapse in a specific breast cancer subgroup that does not respond to pre-operative chemotherapy treatment. The tumoural microenvironment consists of all those non-cancerous cells and substances that surround the tumour and interact with it.

Consequently, as a result of the study, new administration patterns for current treatments could be instated and, based on these biomarkers, new drugs designed in the future.

In addition to the HTVC, other participants in this project include the hospitals Joan XXIII, Bellvitge, Vall d'Hebron, Virgen de la Macarena in Seville, Sant Joan in Reus, the Hospital of Ciudad Real, and the Centre François Baclesse for the fight against cancer of Caen (France). Furthermore, also collaborating in the study are mathematicians and engineers from the Biomedical and Biocybernetic Institute of Warsaw and from the BioTICLA group at the University of Caen Basse-Normandie.



The IDIBGI starts up the first biobank in the comarques of Girona

The Catalan Ministry of Health has granted authorisation for the constitution and functioning of the Biobank of the Institute for Biomedical Research of Girona (IDIBGI), located at the Doctor Josep Trueta University Hospital, but that draws together the entire hospital and research network of Girona. The aim of this organisation is to collect and store biological samples of human origin and the data associated with them in order to facilitate research projects.

The IDIBGI Biobank forms part of the Catalan Network of Biobanks with 13 members, and is also a part of the National Register of Biobanks of the Carlos III Health Institute, which covers the whole of Spain. With this, networking is strengthened and the work of the scientists is facilitated. The Biobank also provides consultancy services on methodological, ethical and legal aspects relating to the use of samples for biomedical research.

► Teaching



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

In the year 2013, nearly 4,500 college and university students took part in work experiences at university hospitals and primary healthcare centres. Most were from the seven universities and ten colleges with which the

ICS has established agreements. They were studying for degrees or other qualifications in such speciality areas as Medicine, Nursing, Pharmacy, Dentistry, Biomedicine, Physiotherapy, Nutrition and Dietetics, Occupational Therapy and Social Work.

Teaching offer

The offer of places, which represents approximately half of hospital places and 75% of primary healthcare in Catalonia, is distributed as follows:

	Accredited places	Offered places	Specialities
Vall d'Hebron	165	135	47
Bellvitge	97	81	42
Germans Trias	67	65	36
Arnau de Vilanova	40	39	27
Joan XXIII	37	35	23
Josep Trueta	37	30	24
Verge de la Cinta	11	10	9
Viladecans	1	1	1
Total	455	396	

	Accredited places	Places offered	Specialities
Barcelona Ciutat	92	55	2
Costa de Ponent	69	54	2
Metropolitana Nord	40	33	1
Catalunya Central	35	24	2
Girona	27	24	2
Tarragona	23	18	1
Lleida	22	15	2
Tortosa	12	8	1
Total	320	231	

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

The aim of the ICS, which every year takes in some 2,400 resident practitioners, 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.

The offering of places is adapted each year to the needs of professionals and the teaching capacity of each of the centres. It is important to highlight the collaboration between the hospitals in different territories to complement some of training areas of higher complexity.

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 (Internal Medicine Residency) programme over 30 years ago. This excellence in training is evident in the high level of attraction of the organisation's centres. In 2013, some 40% 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.

Family and Community Healthcare residents

	Family and Community Medicine	Family and Community Nursing	Total
Costa de Ponent	179	7	186
Barcelona	191	–	191
Metropolitana Nord	113	–	113
Girona	66	6	73
Camp de Tarragona	64	–	64
Catalunya Central	60	–	60
Lleida	43	–	43
Tortosa	25	–	25
Total	742	13	755

Workforce equivalent to full-time for the year 2013.
Source: Khalix Human Resources.

Residents by speciality and hospital

Speciality	Arnau de Vilanova	Bellvitge	Germans Trias	Joan XXIII	Josep Trueta	Vall d'Hebron	Verge de la Cinta	Vila-decans	Total
Allergology	–	–	4	4	–	6	–	–	13
Anaesthesia and recovery	10	28	15	9	9	46	4	–	120
Anatomical pathology	3	8	7	2	2	9	–	–	33
Angiology and vascular surgery	–	4	5	4	–	5	–	–	19
Cardiology	5	14	15	10	9	15	–	–	66
Cardiovascular surgery	–	3	1	–	–	3	–	–	7
Clinical analyses	2	–	2	3	3	–	1	–	11
Clinical biochemistry	–	6	4	–	–	9	–	–	19
Clinical neurophysiology	–	1	–	–	–	5	–	–	6
Clinical pharmacology	–	4	2	–	–	7	–	–	13
Clinical psychology	4	1	–	–	–	8	–	–	13
Digestive system	4	12	8	3	4	11	–	–	41
Ear, nose and throat	3	7	–	2	–	7	–	–	19
Endocrinology and nutrition	4	8	4	1	5	5	–	–	26
General and digestive surgery	4	19	8	3	5	21	–	–	60
Geriatrics	–	–	–	–	–	4	–	–	4
Haematology and haemotherapy	4	8	11	4	3	12	–	–	42
Hospital pharmacy	3	8	5	3	4	12	–	–	36
Immunology	–	1	3	–	–	2	–	–	5
Intensive medicine	6	14	14	9	10	15	2	–	70
Internal medicine	9	31	9	14	6	35	3	5	112
Medical and surgical dermatology and venereology	4	4	5	–	–	4	–	–	17
Medical oncology	3	12	9	–	7	13	–	–	44
Mental health nursing	–	2	–	–	–	–	–	–	2
Microbiology and parasitology	–	4	2	–	–	6	–	–	12
Nephrology	2	7	7	2	5	7	–	–	30
Neurology	–	12	11	–	4	12	–	–	38
Neurosurgery	–	4	5	–	3	5	–	–	18
Nuclear medicine	–	5	–	–	–	6	–	–	11
Obstetric and gynaecological nursing (UGR)	6	–	8	8	7	8	5	–	42
Obstetrics and gynaecology	10	4	8	7	8	25	3	–	65
Ophthalmology	2	12	5	3	–	13	–	–	34
Oral and maxillofacial surgery	–	5	–	–	–	10	–	–	15
Orthopaedic surgery and traumatology	4	15	13	10	10	27	5	–	83
Paediatric nursing	–	–	–	–	–	10	–	–	10
Paediatric surgery	–	–	–	–	–	7	–	–	7
Paediatrics	12	–	20	12	11	59	4	–	118
Physical therapy and rehabilitation	–	6	10	2	–	15	–	–	34
Plastic, aesthetic, and reparative surgery	–	5	2	–	–	10	–	–	17
Preventive medicine and public health	–	2	–	–	–	8	–	–	10
Psychiatry	11	15	–	–	–	16	–	–	42
Pulmonology	2	8	7	–	4	11	–	–	32
Radiodiagnosis	2	15	8	4	8	20	4	–	61
Radiopharmacy	–	–	–	–	–	2	–	–	2
Radiophysics	–	3	–	–	–	3	–	–	6
Radiotherapeutic oncology	1	5	3	–	3	3	–	–	14
Rheumatology	–	8	4	–	–	4	–	–	16
Thoracic surgery	–	1	–	–	–	2	–	–	4
Urology	4	10	5	3	–	8	–	–	29
Total	125	341	246	123	131	548	32	5	1,550

Workforce equivalent to full-time for the year 2013.
Source: Khalix Human Resources.

7th ICS Specialized Healthcare Training Conference

In the month of October, in Girona, the 7th ICS Specialized Healthcare Training Conference was held, together with the 15th Teaching Committees Network Conference. The central subjects were the cross-disciplinary training of residents and the Framework Plan for the Management of Teaching Quality in Catalonia.

Cross-disciplinary training includes aspects that are fundamental in the practice of future specialists such as communication skills, bioethics, clinical management, patient safety, research methodology, critical reading of medical bibliography or healthcare legislation.

Moreover, the latest decree that regulates specialised training establishes the obligatory nature of developing teaching quality plans at all accredited centres. The Framework Plan, produced with significant participation by ICS professionals, establishes the basic criteria for quality in the training process, as well as specific indicators in each of the areas, leaving a broad margin for the development of excellence. Once implemented, it will allow the establishment of benchmarking among teaching centres, for the first time, with contrastable criteria.

The ICS teaching units continue with their training work

Barcelona

Barcelona Ciutat Multi-Professional Family and Community Healthcare Teaching Unit

The Barcelona Ciutat UDMFiC, with 15 primary healthcare teams, was accredited in 2013 as a multi-professional teaching unit with the capacity to provide specialised training in Family and Community Medicine and Family and Community Nursing alike.

The total number of places accredited annually for the UDMFiC is 60. During the year 2013, there were 132 accredited tutors and 232 residents from five different promotions underwent training.

The total number of places accredited annually for Family and Community Nursing training is 32. At present, there are four accredited nursing tutors and four places have been announced for residents who will join next year.

A total of 27 residents carried out obligatory rural rotation during this academic year. Eleven external rotations and 48 optional rotations have been applied for. Moreover, ten residents (five from Spain and five from other countries) have carried out rotations within this UDMFiC.

Vall d'Hebron University Hospital

In the year 2013, the hospital remained among the top in Spain with regard to its capacity to attract residents. It occupied one of the three leading places, both among the first 100 MIR numbers and between the first decile and first quartile of places announced.

The full incorporation of residents into the two nursing specialities (Paediatric Nursing and Midwives) increased the number of residents in the 47 accredited specialities to 546, in addition to 36 residents from external teaching units (of Family and Community Medicine and Occupational Medicine). Rotations at the hospital were carried out by 338 external residents from all around Spain and 133 foreign specialists came for training stays.

In the field of continuing education generated by the institution's professionals, the Hospital obtained accreditation from the Catalan Council for Continuing Education in the Healthcare Professions for 100 training activities.



Camp de Tarragona

Tarragona Family and Community Medicine Teaching Unit

The Tarragona UDMFiC trains 65 residents and has access to six EAPs, three hospitals and other teaching facilities: Pere Mata Institute, Public Health Agency, SEMSA and Management and Provision of Healthcare Services (GIPSS).

The training programme applies methodologies including video recordings, use of dummies, structured observations of clinical practice, participation in community projects, conducting of self-audits, critical incident analysis, computer case-analysis, presentation of sessions, as well as carrying out work in continuous improvement and research.

Joan XXIII University Hospital of Tarragona

The Joan XXIII University Hospital of Tarragona conducts undergraduate training in Medicine as a teaching unit of the Faculty of Medicine of Rovira i Virgili University, and has offered specialized medical training since 1973. Of the Hospital's 36 wards, 23 are accredited for specialist training. It is currently training 125 residents (MIR - medics, FIR - pharmacists and CIR - midwives), supervised by 35 tutors.

Catalunya Central

Catalunya Central Multi-Professional Family and Community Healthcare Teaching Unit

On 31 May 2013, the UDMAFiC obtained its accreditation as a multi-professional unit, which allows it to train Nursing professionals in the Family and Community Healthcare speciality. Moreover, this accreditation has served to increase the teaching capacity of this Unit, which will be able to train a maximum of 27 resident internal doctors and up to 14 resident internal nurses.

Girona

Girona Family and Community Healthcare Teaching Unit

The UDAFiC is host to 20 doctors and four nurses in the Family and Community Medicine speciality at six primary healthcare centres accredited to provide training in Girona. Of the 20 family doctors, six will spend two years at the Josep Trueta Hospital and immediately afterwards they will effect their rotation in primary healthcare. The rest will combine the primary healthcare residence with a stay at different teaching hospitals: Trueta, Palamós, Santa Caterina, Calella and Figueres. The family nurses will be distributed between the primary healthcare teams of Can Gibert del Pla and Taialà.



During 2013, the Barcelona Ciutat, Catalunya Central, and Lleida teaching units obtained accreditation to train professionals in Family and Community Healthcare Nursing.



Dr. Josep Trueta University Hospital of Girona

A total of 56 residents, national and international alike, have joined the Trueta Hospital. These include 28 male and female doctors in different specialities, six Family and Community Medicine doctors, a pharmacist and three nurses in the Obstetrics speciality. In 2013, the Spanish Ministry of Health has accredited the hospital with a new Paediatric Nursing place, which will be offered in 2014.

Lleida

Lleida Multi-Professional Family and Community Healthcare Teaching Unit

The UDMAFiC is formed by seven accredited EAPs from the city of Lleida and three of a rural nature. In 2013, the unit was also accredited for the teaching of residents in the speciality of Family and Community Nursing, in addition to participating in the training of 45 Family Medicine residents. In addition, 13 places for internal residents of Medicine have been announced along with two for Nursing.

Arnau de Vilanova University Hospital in Lleida

During the year 2013, one of the main actions led by the Teaching Committee at the Hospital was the increase in the accreditation of the Cardiology Service. Another achievement was the setting up of a Territorial Teaching Plan with collaboration agreements between the Santa Maria Hospital and Primary Healthcare of Lleida. In this sense, the teaching collaboration with the Sant Joan de Déu Hospital of Lleida-Almacelles was also made effective, thus achieving rotations of residents in the teaching units of Psychiatry, Psychology, and Paediatrics.

With all this, the teaching activity carried out this year allowed the integration of undergraduate, postgraduate, and ongoing training into the healthcare and training sphere in Lleida.

Metropolitana Nord

Metropolitana Nord Family and Community Medicine Teaching Unit

The Metropolitana Nord area UDMFiC carries out intense training activity for students who are completing their training cycle and are going to become future professionals in Medicine, Dentistry, Nursing, and Obstetrics. Thus, cooperation agreements are established with the Autonomous University of Barcelona for students of Medicine and with the International University of Catalonia for students of Dentistry.

With regard to medicine teaching, the UDMFiC coordinates 13 teaching centres in which 77 accredited tutors have directed the specialisation in Family Medicine for 119 internal resident physicians.

Moreover, agreements also exist with several nursing schools, and thus in 2013 there has been training for 432 students in Nursing and 19 in Obstetrics.

Germans Trias i Pujol University Hospital

In the year 2013, the 29th promotion of residents of Germans Trias was incorporated with 65 new first-year specialists who, together with the rest, total practically three hundred professionals in post-graduate training at the Hospital. The centre has been welcoming specialists since 1984, its second year of operations. The majority of residents are medics, but there are also biologists and pharmacists, as well as four new midwives each year. At the same time, the Hospital has a teaching unit attached to the Autonomous University of Barcelona.

Metropolitana Sud

Costa de Ponent Family and Community Healthcare Multi-professional Teaching Unit

The Costa de Ponent UDMAFiC assumes the specialised professional training of residents in Medicine and Nursing in Family and Community Healthcare with the participation of 117 medical tutors, four accredited nursing tutors, five health experts and the collaboration of the Research Support Unit. In this Teaching Unit, during the year 2013, a total of 182 residents trained in Family and Community Healthcare along with seven Nursing residents.

Bellvitge University Hospital

Bellvitge University Hospital is accredited for training in 42 specialities in the health sciences, with the specialised support of 98 teaching tutors. In 2013, 334 resident practitioners were trained and 104 stays processed in the commissioning of resident services at other centres, both nationally and internationally. These stays are a complement to the training that the residents receive, which allow them to get to know other centres, techniques and more specific fields.

Moreover, each year the Hospital hosts an average of 160 training stays for resident practitioners from other centres in Catalonia and the rest of Spain. In 2013, it hosted 64 training stays of different foreign resident specialists or practitioners.

Viladecans Hospital

Viladecans Hospital is accredited for the training of specialists in Internal Medicine and forms part of the hospital schemes for specialised Medicine and Nursing Healthcare Training in Family and Community Healthcare of the Costa de Ponent UDMAFiC.

At Viladecans Hospital, 48 Nursing undergraduate students and 23 Nursing masters' degree students were received.

Terres de l'Ebre

Tarragona Family and Community Medicine Teaching Unit

The Tortosa - Terres de l'Ebre UDMFiC, accredited since 1984, is formed by CAP El Temple and CAP Deltebre teaching centres, as well as three collaborating centres for rural rotation. It has 14 Family Medicine tutors and one hospital tutor. In the year 2013, a total of 25 residents received training.

The referral hospital is the Verge de la Cinta in Tortosa and it has other teaching facilities such as the Pere Mata Terres de l'Ebre Mental Health Centre (CSM TE), CASS and the Geriatric and PADES services of the Hospital de Jesús and the SEM.

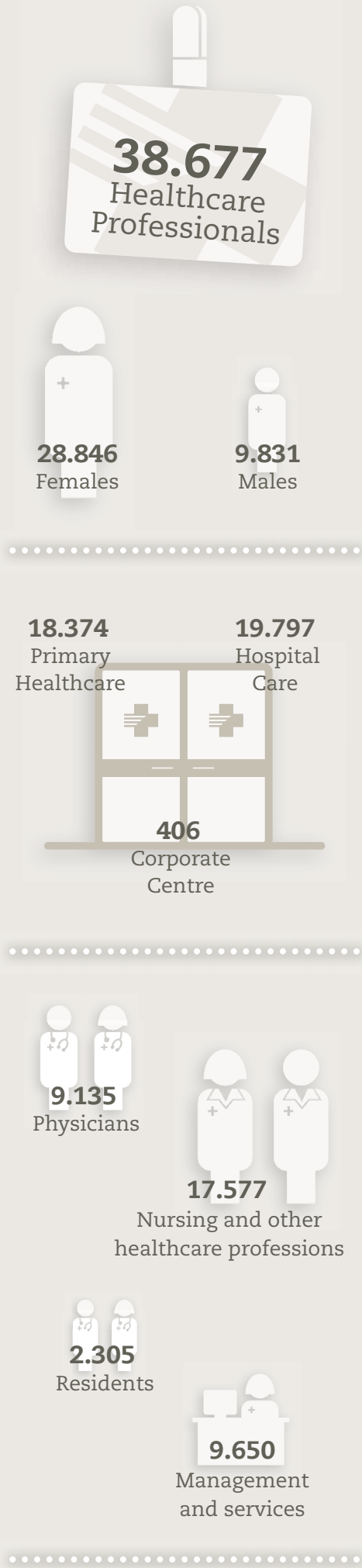
Verge de la Cinta Hospital of Tortosa

The Hospital teaches nine specialities and has teaching agreements with the Vall d'Hebron, Bellvitge, and Joan XXIII hospitals, so that residents can effect the different rotations envisaged in the training programmes.

In the year 2013, a total of 36 residents trained there, between MIR (medics), FIR (pharmacists) and CIR (midwives), and 14 tutors, who are in charge of the training and achievement of teaching targets for each speciality. Furthermore, the residents of the Tortosa UDMFiC and those of Geriatrics from the Santa Creu de Jesús Hospital in Tortosa carry out part of their training here also.



►Healthcare Professionals



Human Resources¹

	Females	Males	Total
Primary Healthcare	13.776	4.698	18.374
Physicians	3.555	2.293	5.848
Nursing and other healthcare professions	6.149	620	6.769
Residents	504	251	755
Management and services functional area	3.568	1.534	5.102
Hospitals	14.806	4.991	19.797
Physicians	1.562	1.725	3.287
Nursing and other healthcare professions	9.795	1.023	10.818
Residents	1.024	526	1.550
Management and services functional area	2.425	1.717	4.142
Corporate Centre²	264	142	406
Total health professionals	28.846	9.831	38.677

1. Workforce equivalent to full-time for the year 2013. Includes permanent, casual, temporary and substitute workers.

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

The ICS sets the annual working hours for statutory personnel at 1,664 hours

The ICS has established for all its statutory staff a working year equivalent to a working week of 37.5 hours, i.e., of 1,664 hours of effective work based on a daytime morning or afternoon timetable. As for night-time working, the annual calculation is set at 1,500 hours.

Law 2/2012, of 29 June, on the Spanish General Budget, establishes that the general working week of staff in the public sector cannot amount to less than 37.5 weekly hours of effective work as a yearly average. This regulation also declares that all agreements that contradict this will be suspended, and specifies that regularisation of the working day will not represent any increase in remuneration.

Furthermore, Royal Decree Law 20/2012, of 13 July, on measures for guaranteeing budgetary stability and for promoting competitiveness, establishes that from 1 January 2013 there will be a maximum of three days' leave for personal matters and 22 working days for holidays, or those that correspond proportionally to length of time worked, and modifies the Basic Statute of Public Employees (EBEP) in this sense.

Since these are two regulations that are state-wide in their scope, they have the nature of basic regulations and, therefore, are applicable in all autonomous communities and also in the ICS.

With the aim of negotiating with social agents the effective implementation of the new working day and the new regime of permits and holidays, in the month of February the Management of the ICS organised a Healthcare Sector Negotiating Table, where it presented a proposal for agreement.

Despite the negotiating efforts and, in the absence of an agreement, the ICS Management, like the practical totality of the National Health System and the approved sector, established for all ICS statutory personnel a work-

ing year equivalent to 37.5 hours per week imposed as a basic standard, and adopted the same working timetable as that set by the central Administration, which is of 1,664 hours of effective work in a daily morning or afternoon timetable. As for night working, the annual calculation is set at 1,500 hours, equivalent to the change from 9 to 3 days' leave for personal matters. This new hours regulation does not affect hospital medical staff working split shifts as their working year already exceeds 1,664 hours.

The ICS and the trade unions UGT, CCOO, SATSE, and CATACT-CTS sign an agreement to facilitate voluntary mobility of the institution's statutory personnel

The ICS and the trade union organisations represented at the Healthcare Sector Negotiating Table (with the exception of Doctors of Catalonia) have signed an agreement to facilitate the voluntary mobility of the institution's statutory personnel.

The agreement proposes a procedure of competitions for voluntary mobility that will be carried out in two phases. The first is specific and internal for healthcare professionals holding a diploma in Nursing in Primary Healthcare and Hospitals, who will be able to participate in them to compete for places offered in the area where they exercise their professional activity (primary healthcare services or hospitals).

Once this first round is resolved, and with its resulting vacancies (places that are not vacant at the start of the process, but that are generated by the transfer movement itself and are incorporated into the competition to favour the mobility of other professionals), voluntary mobility competitions will be organised for related professional categories in the Human Resources Organisation Plan (PORH) of the ICS, i.e., all the professional groups in healthcare, administration, social work technicians and hospital porters.

Value will be attached to services provided (with a maximum of 51 points), the credits obtained in the last level of professional career reached (49 points), and accreditation of the level of proficiency in Catalan (10 points).

The number of places offered will be equal to half of the posts occupied by supply professionals, the totality of the work posts in commission of service and the temporary readmissions, in addition to all those vacancies that arise.

15,400 professionals take courses via the virtual campus

One year after it was set up, a total of 15,399 professionals from the ICS have taken courses via the institution's virtual campus. In total, 89 different training activities have been carried out, which make a sum total of 257 editions.

The virtual training offer includes face-to-face courses in communication, management, and administration. The activity that registered the largest number of students was a set of courses aimed at different professional collectives on quality and patient safety, with a total of 5,216 students, split across 15 versions. It was followed by a course on the Organic Law on the Protection of Personal Data, with 4,441 students and 42 editions. Also worthy of highlight were training activities on palliative care (338 students/1 edition), stress management (292/4), time management (290/5) and prevention and early detection of cancer (244/1).

The ICS covers over 2,300 places through recruitment processes

During the year 2013, sufficient recruitment processes were resolved to cover a total of 2,309 positions for various categories of healthcare and management and services professionals, with 21,207 aspiring candidates:

Categories	Candidates	Places offered
Nursing auxiliary	4,833	468
Nursing diploma holder	13,914	1,198
Family doctor or GP	1,610	478
Dentist	346	40
Paediatrician	107	89
Radiodiagnosis technician	397	36

The definition of new professional profiles is strengthened

To respond to the different organisational needs and provide services to citizens, the ICS has defined, during the year 2013, new professional profiles and has updated some of those already existing, which have been incorporated into the temporary jobs bank:

- User services coordinator
- Occupational Nurse
- Legal expert
- Case management nurse
- Human resources expert
- Human resources administrator
- Communication officer
- Human resources secretary
- Press officer
- Expert in the management of cleaning, waste and pest control
- Architect



The Government approves the integration into the ICS of the healthcare staff from the Department of Justice attached to penitentiary and juvenile justice services

With this decision, around 280 healthcare professionals previously attached to the Department of Justice, will change to become statutory personnel of the ICS in the month of October 2014. Also achieved was the effective merging of penitentiary healthcare into the public healthcare system of Catalonia, which is responsible for the healthcare of all citizens.

The people who sign up for a networked course have to register via the corporate intranets. Subsequently, they can access it from any place with an Internet connection and also through a mobile device.

Continuing training grows among ICS professionals

In the year 2013, some 75% of professionals at the ICS followed some continuing training activity, as compared with 67% in 2012. This percentage does not include residents or substitutes. The total hours offered totalled 1,086,781, a figure that represents an average of 31 hours per worker and growth with respect to the previous year, with an average of 23 hours.

As regards distribution by thematic areas, some 58.6% of the hours were devoted to the healthcare area, with 3.9% to the management and services area and 37.5% to cross-disciplinary themes. The latter were distributed fundamentally between quality and continuous improvement (25%), communication (22%), information technologies (18%), rights and bioethics (14%) and work safety and risk prevention (9%).

The Mossos d'Esquadra (Catalan Police Force) and the ICS coordinate actions to prevent situations of violence at healthcare centres

In 2013, the ICS worked together with the Mossos d'Esquadra to prevent situations of violence at healthcare centres, with the aim of providing a joint and coordinated response to situations involving a threat to safety. Therefore, recommendations have been offered to healthcare professionals regarding how to act in cases of violence and also efficient mechanisms for minimising the risk of suffering a problem of these characteristics and, should one occur, to facilitate reporting of the incident.

The joint actions of both bodies focus on an operating guideline for joint actions (in the case of envisaged situations, above all in cases of patients who are potentially conflictive, or unforeseen situations) and the production of the *Guia pràctica d'infraccions penals administratives per a la comunitat de l'Institut Català de la Salut* (Practical Guide to Penal Administrative Infringements for the Catalan Health Institute Community).

Agents from the community relations offices of the Mossos d'Esquadra offered 135 presentations on security advice to prevent situations of violence at the different ICS healthcare centres, which registered an attendance of over 4,000 employees.

The Government awards the Josep Trueta medals for healthcare merit to six professionals linked to the ICS

Six of the seven people who received the Josep Trueta medals 2013 for healthcare merit were professionally linked to the ICS. They were Sports Medicine specialist Miquel Albanell Pemán, Nursing diploma holder Margarita Coll Falgas, specialist in Preventive Medicine and Public Health doctor Albert J. Jovell Fernández, paediatrician Gonçal Roch Soler, Oncology specialist Rafael Rosell Costa, and Haematology specialist Josep Maria Vilàs Cortasa.

The 6th Healthcare Administrators Conference analyses the role of ICTs in health

The territorial managements of Lleida and Alt Pirineu i Aran organized the **6th Healthcare Administration Conference of the ICS**, which was held at the Seu Vella in Lleida and which was attended by around a thousand professionals from the ICS Citizen Service units. Under the slogan "New technologies and new models for communication with citizens", the conference debated the growing use of information and communication technologies (ICTs), of the social networks and the web 2.0 and also aimed to offer the keys for tackling the technological future, increasingly present in health services.

The meeting allowed different ways of working and interaction with users to be known in order to put into practice the initiatives that have been developed to improve the quality of their care. Over a hundred abstracts and 95 posters were presented.

As a new feature this year, people registered at the conference were able to follow it by physically attending, or online in real time, and also through the Twitter account **@jornadesics** with the hashtag **#adminics2013**, which was a trending topic in Barcelona from 11 a.m. to 1 p.m.



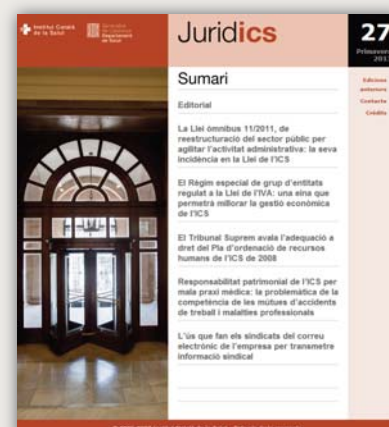
Sixteen ICS professionals are selected for a COMB Excellence Award

The Official Medical Association of Barcelona (COMB) has selected 16 professionals from the ICS to receive Professional Excellence Awards, which are granted in the spheres of hospital medicine, primary healthcare, public and mental health, social care, biomedical research, medical education, and medical humanities. Furthermore, the COMB has granted awards to the Primary Healthcare Team of El Carmel, in Barcelona; the Primary Healthcare Service of the Bages, Berguedà and Solsonès, and the Gynaecology Service of Bellvitge University Hospital.

The professionals winning the awards, who exercise their activity in both primary healthcare and in the hospitals Vall d'Hebron, Germans Trias i Pujol, Bellvitge and Viladecans, were Alícia Val Jiménez, Bonaventura Clotet Sala, Dolors Forés Garcia, Enriqueta Pujol Ribera, Jaime Alijotas Reig, Jordi Vilaseca Canals, José Manuel Casamitjana, Josep de la Flor Bru, Josep Franch Nadal, Josep Lluís Ballvé Moreno, Juanjo Mascort Roca, Magdalena Bundó Vidiella, Margarita Delmas Ljunberg, Marta Piñol Pascual, Mercè Barenys de Lacha, Miquel Casas Brugué, Lluís Riera Canals, Ramon Orriols Martínez and Tamara Sancho Candia.

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

The Legal Advisory Service's activity can be split between four main areas of action. 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, carried out 800 actions in the year 2013. 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, won 371 cases and lost 64. The Assets Liability Claims Area, which deals with administrative assets liability cases and represents the institution in contentious cases, won 97 of the 133 assets claims lodged. Finally, the Penal Affairs Area, which legally advises and represents the ICS in penal procedures, successfully processed 98 cases in the year 2013, while 33 were totally or partially rejected.



Vicenta Mitjà, Award for the Best Professional Career Path

Vicenta Mitjà Juan, a nurse with the ICS in Girona, received the Award for the Best Professional Career Path, which has been awarded for the last three years by the Official Nursing Association of Girona. Mitjà was director of Nursing at the Josep Trueta Hospital, she has worked at the Family and Community Medicine Teaching Unit and she currently provides services at the ICS-IAS Strategic Think-Tank.

Sixteen healthcare professionals received Germans Trias Talents Grants, which will facilitate their career continuity

Fourteen medical professionals, a midwife and a pharmacist were the young professionals recognised at the second edition of the Germans Trias Talents Grants to receive funding designed to carry out a research project at the Germans Trias i Pujol Health Sciences Research Institute and continue providing healthcare activity at the Hospital. In total, the grants are valued at 125,000 euros, provided by the Germans Trias Institute Foundation, the Cataluña-La Pedrera Foundation and the laboratories Novartis, Esteve Teijin and Shire.



To compete for these awards, professionals must present a research project backed by a mentor. Approximately 30 projects presented were evaluated by a committee of the Germans Trias and its research foundation. The professionals who were finally selected will have a job contract with the Germans Trias Institute and will also maintain, in the majority of cases, their healthcare work at the Hospital. Four of them received grants in 2012 and managed to renew them this time around. From this year, the four best projects will have continuity for two years.

Carles Constante, new Chair of the Board of Directors of the ICS

On 16 April 2013, the Government agreed the appointment of Carles Constante Beitia (1958), general director of Planning and Research in Health of the Catalan Ministry of Health as chair of the Board of Directors of the ICS.

Carles Constante is a qualified doctor with a postgraduate diploma in Healthcare Management and he holds a higher technical qualification gained through public examination in the General Administration of the Catalan Government. He also has extensive career experience in the Catalan public health system where he has occupied different positions of responsibility, both at healthcare centres and within the Catalan Health Service. He was also director of the Andorran Health Service.

He is currently responsible for the General Management of Planning and Research in Health and is entrusted, among other responsibilities of this General Management, with the Health Plan for Catalonia 2011-2015 and the Strategic Plan for Research and Innovation, a responsibility which he will continue to exercise given the non-executive nature of the ICS Board of Directors Chair position.

►Citizens

Satisfaction surveys, a tool for finding out our users' opinions

Finding out the opinions of citizens who are users of the ICS healthcare centres is one of the organisation's priority objectives, since it is a way of detecting their demands and expectations in order to be able to design and introduce specific improvement plans.

The degree of satisfaction of users of centres and services of the ICS is contained in the Satisfaction Surveys Plan (PLAENSA®) of people with CatSalut health insurance, which includes indicators regarding the degree of global satisfaction and of loyalty, through the question "Would you continue to come here?". In the year 2013, the people surveyed were aged over 15 years and had been users of urgent hospital care, pregnancy, childbirth and postnatal care, as well as outpatient rehabilitation.

Hospital care satisfaction indicators in hospital emergency care

	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
Global satisfaction level	7.48	7.98	8.05	7.52	7.51	7.54	7.70	7.79
Loyalty (%)	80.6	91.3	97.0	85.1	82.0	85.6	84.7	85.0

Pregnancy, childbirth, and postnatal care satisfaction indicators

	Arnau de Vilanova Hospital	Germans Trias Hospital	Joan XXIII Hospital	Josep Trueta Hospital	Vall d'Hebron Hospital	Verge de la Cinta Hospital
Global satisfaction level	7.84	7.66	8.34	8.43	8.01	8.14
Loyalty (%)	80.5	79.5	83.7	88.6	79.12	83.1

Outpatient rehabilitation satisfaction indicators

	Bellvitge Hospital	Germans Trias Hospital	Josep Trueta Hospital	Vall d'Hebron Hospital	Verge de la Cinta Hospital
Global satisfaction level	8.3	8.05	8.0	8.0	8.7
Loyalty (%)	88.4	93.0	87.5	86.6	93.9



There was a reduction of 11.6% in complaints from users and an increase of 28.8% in thanks

In the year 2013, the total number of complaints presented at the ICS hospitals and primary healthcare centres fell by 11.6%, a figure that consolidates the decline begun in the previous year. This fall in complaints from users is especially significant in issues relating to information (-30.5%), followed by those regarding catering, habitability and comfort (-18.3%), staff treatment (-15.1%), healthcare (-12.9%), documentation (-10.4%) and organisation and procedures (-9%).

Moreover, although the gratitude of users is usually manifested verbally and directly to the professionals involved, it should be highlighted that during the year 2013 the number of thanks manifested by citizens in writing increased by 28.8%.



ICS users programmed more than three and a half million appointments online

With 3,500,765 appointments programmed via the ICS website, the **booking of appointments** for family medicine, paediatrics, nursing, dentistry, and social work services is consolidated year after year as one of the ways most used to book a primary healthcare appointment in advance. User access to communication technologies, increasingly generalised, has meant an increase of programming via the Internet of 36.6% with respect to the previous year.

Moreover, users also use online procedures to change primary healthcare centre (1,880 people) and to change primary healthcare team within the same centre (9,419 people).

The ICS centres promote healthy habits among the population

For another year, the primary healthcare and hospital teams of the ICS have involved themselves in the prevention and promotion of health beyond their appointments diary. The result of this commitment are the numerous awareness-raising activities that have been developed during the year 2013, coinciding with the world days devoted to cancer, AIDS, smoking, chronic obstructive pulmonary disease, stroke, physical activity, hand cleaning and blood donors, among others.

800,000 users have now asked to receive information from their primary healthcare centre via SMS or email

The ICS's primary healthcare teams have incorporated the sending of SMS messages and emails into their everyday healthcare practices in order to inform users of the results of complementary tests such as analyses, cytologies, or eye fundus examination.

This messaging service, integrated into ECAP, allows professionals to communicate clinical data in a totally personalized, secure, consented, and confidential way, and it also allows mass sending of general data to inform people, for example, about the start of a flu vaccination campaign or other activities of interest to the general public.

Since the system was launched in late 2011, a total of 799,356 ICS users have already given their consent to receive information from their primary healthcare centre via SMS or email. During this time, 26,096 SMS messages and 138,720 emails have been sent. A significant percentage of the messages have been sent from the Vallès Occidental primary healthcare teams, who were the first to introduce these new channels of communication with their users.

The ICS's aim is to generalize the use of this messaging service across the whole of Catalonia and also to send medication plans, diets, and other kinds of information that do not require a face-to-face visit and can avoid patients unnecessarily having to travel to health centres.

The idea is, in summary, to increase people's accessibility to primary healthcare services, improve the management of consultations with healthcare professionals and to offer alternatives to face-to-face visits to provide a greater degree of satisfaction for users and benefit to the relationship between healthcare professional and patient.

New telephone numbers for booking appointments at all the ICS international health units

The ICS has placed at the disposal of its citizens two unique telephone numbers to book appointments at the organization's international health units: 93 326 89 01 and 902 111 444. These telephone numbers, which were already used for programming visits to primary healthcare centres, also now offer the appointment booking service for international health units, as well as for requesting an advisory appointment and for the administration of vaccines when travelling to certain destinations.

The ICS has nine international health units across the territory that offer a broad range of services that includes advice for travellers (information on general preventive measures when travelling to any country or area in the world, recommendation and administration of vaccinations, recommendation and prescription of preventive treatment for malaria, advice and recommended first-aid kits for travellers and emergency visits for unplanned travel), to treatment for health conditions imported following a trip abroad.

The unification of the international health appointment booking telephone will be very useful for making known and facilitating access to any of the units, which have different availabilities in terms of dates and times. In this way, each traveller can choose at which centre he or she wishes to book an appointment, according to needs and independently of area of residence. In the near future, the ICS will also be making available to travellers its appointment booking service online, for all the international health units that it manages.



The Trueta Hospital, Girona City Council, and ACCU Catalonia begin a pioneering project in Spain in benefit of patients with Crohn's disease and ulcerative colitis

In December, the "I can't wait" project was launched, an initiative by ACCU Catalonia and the Trueta Hospital, designed for all those people who due to a non-contagious health problem may need to use a toilet urgently and unforeseeably at any moment. Specifically, these are patients with inflammatory bowel disease, ostomized patients, colectomized patients and patients operated for rectal cancer, who, at the proposal of the digestive doctors of the Josep Trueta Hospital, are given a campaign card. The cards are distributed in accordance with medical criteria, both to patients with inflammatory disease and those recently operated who during the post-operative period may suffer intestinal dysfunctions.

Thanks to the collaboration of Girona City Council and traders associations, 123 establishments and facilities in the city had joined the campaign by the end of 2013 and allow these patients to use their toilet facilities. The spaces area identified by a sticker placed at the entrance door.

To facilitate their location, Girona City Council has produced a map with all the toilet facilities that exist in the city, including those of the municipal facilities, so that people affected can more easily detect which are the points that they can access freely.

Almost a thousand patients benefit from the Expert Patient Catalonia Programme®

During the year 2013, a total of 59 EAPs and one hospital unit of the ICS took part in the Expert Patient Catalonia Programme®. In this time a total of 810 patients participated, 59 of them as expert patients, and a total of 73 groups have been set up: 10 for heart failure, 23 for oral anticoagulant therapy, 16 for chronic obstructive pulmonary disease (COPD), 19 for diabetes mellitus type 2, four for quitting smoking, and one for fibromyalgia.

Expert patients are people affected by a chronic disease who are capable of taking responsibility for their own illness and of taking care of themselves. The groups they lead aim to promote lifestyle changes that improve patients' quality of life through exchanging and transferring knowledge and experience between expert patients and other patients in a complicit, empathetic and productive way. The healthcare professional acts as an observer and only intervenes when necessary.

Analysis of the results shows a high level of participation and participant satisfaction, and simultaneously shows significant improvements with respect to knowledge, habits, lifestyles, self-care, and quality of life among participants of the different groups set up between the beginning and the end of the intervention, as well as at six months and 12 months following it. Furthermore, comparing the situation of patients one year prior to the start of the sessions and one year following the end of them clearly shows a reduction in resources consumption in the form of primary healthcare appointments, visits to Emergencies, and hospital admissions due to decompensation of the disease.



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

Apart from disseminating contents through web channels and social networks, maintaining ongoing contact with the media and proactively reporting on the healthcare projects and activities, teaching and research taking place daily at the ICS centres is a corporate strategic objective to ensure that all citizens are aware of all that the institution does.

To this end, during the year 2013, over 550 press releases were disseminated, both from the Corporate Centre and from hospitals, primary healthcare centres, and research institutes linked to the ICS. At the same time, nearly 5,000 requests from the media have also been attended to, both printed media and others such as radio, television and digital media.

Over a thousand school students visit the ICS healthcare centres

Over a thousand students 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 the Germans Trias, Joan XXIII, Dr. Trueta and Verge de la Cinta.

These visits have different aims according to the age of the children. The youngest are given a closer view of the world of healthcare from a very playful viewpoint, showing them the facilities and giving them an explanation about medical examinations, the importance of diet and physical exercise, ending with a drawing session.

In the case of older students, the visit aims to introduce the institution, as well as provide them with information from a dual angle: prevention and professional perspectives.



Professionals from ICS primary healthcare centres explain to the public how to act in the case of cardiac arrest

With slogans such as “Children saving lives. Learning cardiopulmonary resuscitation at schools” or “Your hands can save lives. Let’s save over 100,000 lives”, professionals from various primary healthcare centres and from the Vall d’Hebron, Germans Trias and Joan XXIII hospitals have carried out different activities to raise awareness among the population regarding how to act in the case of cardiac arrest, to coincide with the European Day for Raising Cardiac Arrest Awareness.

Firstly, basic life support and first aid courses were taught to secondary and sixth-form pupils. Secondly, talks were given aimed at the general public at civic centres and municipal premises, accompanied by practical sessions, and local radio programmes were produced in which professionals transmitted to the public the importance of immediate action in the case of cardio-respiratory arrest through cardiopulmonary resuscitation (CPR), which consists of simple manoeuvres such as cardiac massage and artificial respiration. Finally, training sessions were held for professionals and, in some cases, courses for reaccreditation in these techniques.



► Corporate Social Responsibility

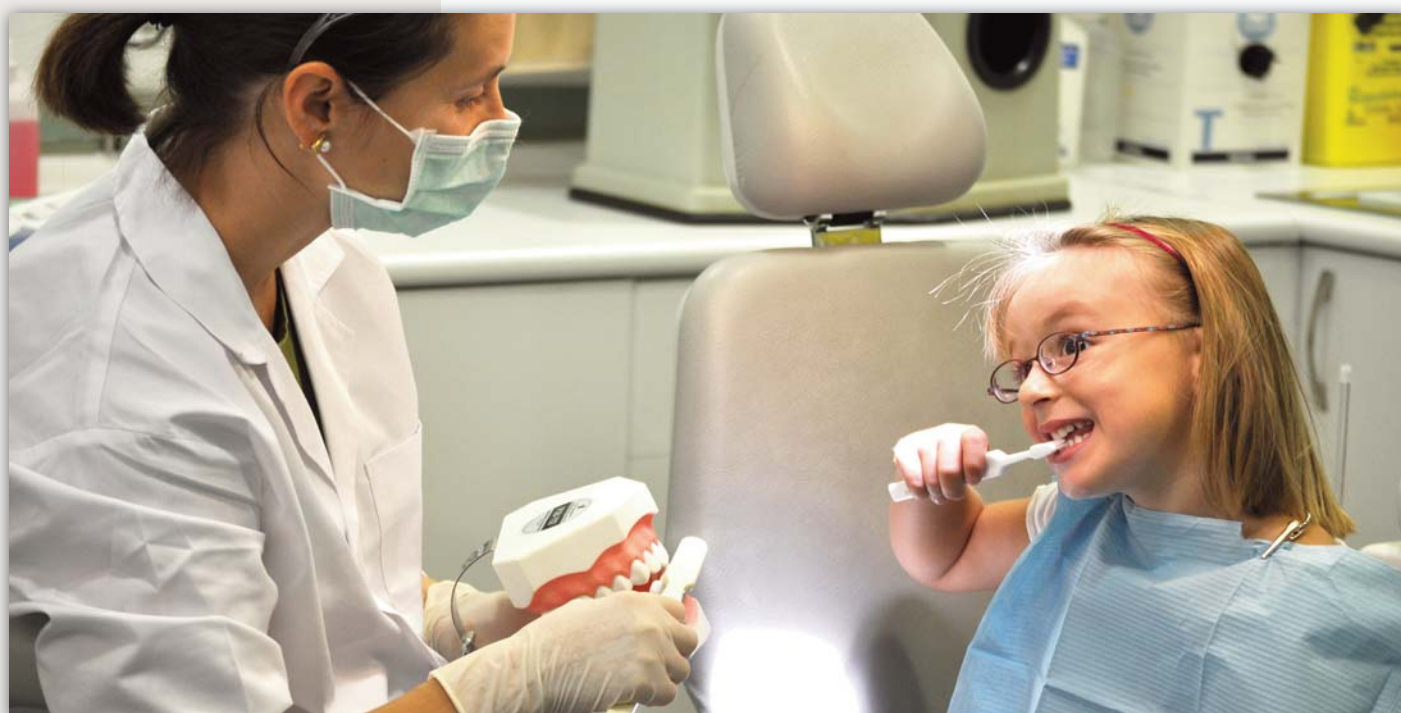
The management of gender equality, a challenge for achieving greater productivity

The ICS continues working to ensure equality with special emphasis on the application of the procedure for the prevention, action, and resolution of psychological, sexual, gender or sexual-orientation-based harassment and other discrimination in the workplace.

Thus, in 2013, the Equality Office attended to a total of 34 women who were the victims of male violence to provide them with support and find the best workplace solution to their situation: change of shift or work centre, application of flexitime and granting of specific permits within the cases envisaged in the legislation in force.

Other actions framed within the ICS Equality Plan were the publication of an online course on inclusive language and two exhibitions from the Catalan Women's Institute titled: "Women and Science" and "Sexist Violence in Partnerships: Deconstructing Myths", as a measure for raising visibility and awareness of gender and equality issues.

The ICS is one of the five Catalan companies that are pioneers in equal opportunities issues and it is included in the Catalan Ministry for Enterprise and Occupation's Register of Equal Opportunities Plans.



The Committee for Healthcare Ethics in Primary Healthcare is incorporated into the ICS

The Committee for Healthcare Ethics in Primary Healthcare of the Jordi Gol Primary Healthcare Research Institute (IDIAP), created in the year 2003, changed in 2013 to become the Committee for Healthcare Ethics in Primary Healthcare of the Catalan Health Institute.

Its activities are now confined to the ICS own sphere, without prejudice to other organisations linked to the health sector requesting participation, incorporation and adhesion to the work developed therein. This attachment is inserted into the strengthening of values that inspire the ICS's

activity, prominently including respect, humanisation and ethics in care for patients and users.

The Committee has been set up with the aim of being useful to professionals and to the institutions where they work, to users and to society. Its purpose is to promote reflection and ethical behaviour in clinical decision-making at the heart of primary healthcare. It is a consultative, plural and multidisciplinary committee, that is at the service of professionals and users to help analyse the problems and ethical conflicts that may arise in healthcare practice, and that does not substitute in any case the own decisions of professionals or of institutions, but helps to recapacitate and take the best decision within an ethical framework of consensus.

Its objectives are to ensure the protection and respect of the rights and duties of users and of professionals; to advise, from an ethical point of view, the taking of clinical, healthcare and organisational decisions; to produce guidelines and recommendations in those cases or situations that may generate conflicts of an ethical type; to raise awareness and train in ethical attitudes within the institution, and to contribute to improving the quality of healthcare provided.

Four primary healthcare centres achieve EMAS certification

The primary healthcare centres of El Carmel, Sant Antoni de Vilamajor, Teià, and Falset obtained the European Eco-Management and Audit Scheme (EMAS) certification as well as ISO 14001:2004 after passing the external audit conducted by the company AENOR.

The ICS primary healthcare system environmental management system has renewed its certification, and with these four new primary healthcare centres, there are now 47 centres included in it.

The EMAS scheme represents the implementation of a work system based on continuous improvement and directed towards minimising the impact that healthcare activity has on the environment, in line with the ICS's environmental policy.

One of the EMAS requisites is the publication of an **environmental statement** containing the organisation's environmental data.



Various ICS centres take part in the Great Food Collection

The Germans Trias, Josep Trueta, Bellvitge and Viladecans hospitals and various primary healthcare centres took part in the Great Collection that the Fundació Banc dels Aliments (Food Bank Foundation) organised in late November. Between all the centres, some 10,000 kg of basic foodstuffs were collected such as legumes, rice, olive oil, milk, and tinned foods, among others.

The campaign was developed simultaneously for the four food banks of Catalonia with the aim of responding to the food emergencies of the neediest people in our country.

► The ICS Online


January


 The launch of **30 anys, 30 veus**, (30 years, 30 voices), a blog that commemorates the ICS's 30th anniversary and reviews the history of the institution through accounts from its professionals: **81** entries, **48** comments, **70,303** views. #30icscat to talk about it on Twitter.

 The **oncology residents at Vall d'Hebron open a blog** to attract the best talent among future oncologists.

April

 The **Twitter account of @icscat** reaches **5,000** followers.


 **@hjoan23** and **@hvcinta**, the Camp de Tarragona and Terres de l'Ebre hospitals start tweeting.

 New blogs for the **EAP Navàs-Balsareny** in Catalunya Central and the **Projecte CIMS** in Girona.



July

The most successful tweet of the summer!

 **RT @icscat:** reserves of **0-** are running very low. In summer, this blood group is especially needed for accidents and emergencies. Come and donate at @donarsang

↩ ↻ ★ ...

October

 **New hashtags**
#hvhebron, #harnau, #htrueta, #hviladecans, #hbellvitge, #hvcinta, #hjoan23, #hgermanstria, #aprimària, #aprimàriabcn, #aprimàriamn, #aprimàriams #icsrecerca, #icsdocència, #icscampusvirtual, #modelcolaboratiu, #PROSICS, #salutinternacional, #ECAP

 The **CAP Llibertat de Reus** blog, the first ICS blog in Reus.

 Costa de Ponent Primary Healthcare lands on Twitter with **@cubellescun** and **@capbegues**




February

 The **Alt Penedès Paediatrics Care Team** takes to the social networks with a blog and Facebook and Twitter accounts.


ics
pediatria
alt
penedès

May

 **@apicstarte**, primary healthcare of Tarragona and Terres de l'Ebre also enters the social networks.


 **#2013lleidaUSI**
International health holds a conference in Lleida.

 The **ICS achieves 3,000 "likes"** on Facebook.

 The **CAP Passeig de Sant Joan** in Barcelona is also blogging.

August

 The **CAP el Temple** blog, the first ICS blog in Tortosa.

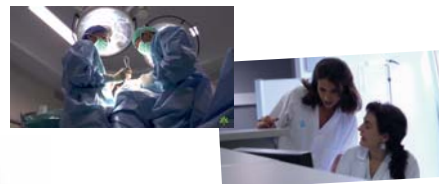
 With **#icsmemo2012** the contents of the ICS annual activity report are disseminated.

 The **@capsantjoan** opens during the holidays.




March

 **Inauguration of the YouTube channel of the ICS in Metropolitana Nord.** In 2013, it reached **11,000** views.



In spring, new centres will be joining the networks:

 Twitter: **@icsgirona**, **@htrueta**, **@eapalmenar**, **@eapramonturro** i **@eapvilanovacami**

 Blog: **EAP Vilanova del Camí**

 Facebook: **EAP Almenar-Alfarràs**

June

 The new **EAP Sallent** blog is launched. Catalunya Central is the top-blogging ICS management.

 The **@eapcervera** also joins Twitter.


 The ICS research institutes total over **5,000** followers on their Twitter accounts: **@idiapjordi**, **@idibell_cat**, **@GTRcerca**, **@Info_IRBLleida** y **@VHIR**


September


 **On the right track! 6,000 followers on Twitter for @icscat**

 The **CAP Passeig de Sant Joan** is now also on Facebook.


November

 **@jornadesICS** non-stop this month with #adminICS2013, #assirtgn2013 and #directiusICS

 The **ECAP** blog, a new space for shared participation and knowledge for all primary healthcare professionals that use the ECAP.

 The fourth edition is published of the **Guia d'usos i recomanacions de l'ICS a les xarxes socials** (ICS Guide to uses and recommendations on the social networks).

December

 **Alt Pirineu i Aran and Primary Healthcare of Barcelona Ciutat finish the year on Twitter with @icspirineu and @apicsbcn**

 The **ICS video Christmas card** attracts **2,588** views in three weeks.

 The **CAP Rio de Janeiro** blog, the last of the year.



The ICS continues expanding its presence on the social media networks

From late 2010, the ICS's commitment to build an institutional presence on social media networks and to open new channels for communication that connect quickly and directly with the public and with healthcare professionals has proven itself to be clearly positive and successful. Today, the organization is fully immersed in these spaces for communication, connectivity, participation, and knowledge sharing that are provided by the social media networks and by December 2013, it had 12 Facebook pages, 30 Twitter accounts, and 31 thematic and territorial blogs, as well as three YouTube channels and four on Slideshare.

All the pages and accounts opened follow the recommendations of the *Guia d'usos i recomanacions de l'ICS a les xarxes socials* (ICS Guide to Uses and Recommendations on the social networks), which in November saw its 4th edition, with updating of contents, recommendations and good practice necessary made accessible to all professionals in order to ensure a successful presence on the social networks.

The research institutes linked to ICS hospitals and primary healthcare centres are also present on the social media networks. The Bellvitge Biomedical Research Institute and the Vall d'Hebron Research Institute have profiles on Facebook and Twitter (@idibell_cat and @VHIR_). The Germans Trias i Pujol Health Sciences Research Institute, the Jordi Gol Primary Healthcare Research Institute and the Biomedical Research Institute of Lleida all have Twitter accounts (@gtrecerca, @idiapjordi and @Info_IR-LLleida).

Twitter

The year 2013 was very prolific on the Twitter channel. Firstly, @icscat ended up being, for the second year running, the health Twitter account with the most followers in Spain, with almost 7,000 and secondly, the number of centres and services that have chosen this channel to access the social networks has doubled, from 15 to 30.

Thus, @htrueta, @hjoan23 and @hvcinta join @hvhebron and there are now five ICS hospitals on Twitter. In addition, the Vall d'Hebron Pharmacy Service's Medication Information Centre also has a Twitter account.

The territorial managements of the ICS in Girona and Alt Pirineu i Aran and primary healthcare in Barcelona and Camp de Tarragona and Terres de l'Ebre have also launched their channels: @icsgirona, @icspirineu, @apicsbcn and @apicstarte.

As regards primary healthcare centres and teams, seven of them have started in this communication channel: @eapalmenar, @capbegues, @eapcubellesun, @eapcervera, @capsantjoan, @eapramonturro and @eapvilanovacami.

Blog

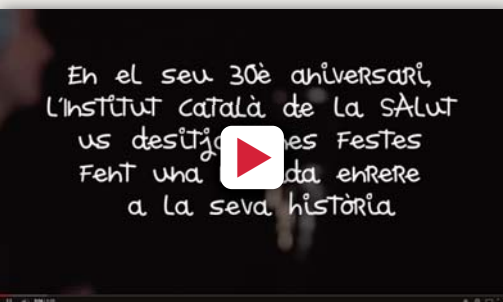
The first blogs in 2013 were the corporate blog *30 anys 30 veus*, opened for the commemoration of the ICS 30-year anniversary, and that of *Vall d'Hebron Oncology Residents*, to attract the best talent among future residents in this speciality.

The first territorial blogs opened belong to Catalunya Central: *EAP Vilanova del Camí*, *EAP Navàs-Balsareny* and *EAP Sallent*. These were followed by the blogs of *CAP Passeig de Sant Joan*, *CAP El Temple* in Tortosa, the *CAP Llibertat* in Reus and *CAP Rio de Janeiro* in Barcelona.

In April the ICS in Girona presented its blog of the *CIMS Project*. Finally, the ICS set up the *ECAP blog*, a platform for disseminating new features and improvements to the ECAP.



The most viewed video of the year was the video Christmas card, which the ICS used to wish people a Happy Christmas 2013, with 2,588 views.



The Territorial Management of Lleida launches a new image for its website

The [website icslleida.cat](http://www.icslleida.cat) modernised its design and renovated the structure of its content.

With this, during the year 2013 the website received a total of 41,596 visits. The most viewed pages are those of the section on the Arnau de Vilanova University Hospital, while the *Guia d'acollida per als residents* (Guide for New Residents) was the PDF file most downloaded by users.

Facebook

Since it was created in December 2010, the [ICS Facebook](#) page has received over 3,400 "likes" and, with the incorporation of the pages of the [CAP Passeig de Sant Joan](#) and the [EAP Almenar-Alfarràs](#), there are now 12 Facebook pages across the organisation.

Youtube

The ICS's [YouTube](#) channel now has over 250 videos published, 80 of these in 2013, with a total of nearly 50,000 views.

In the year 2013, the ICS of the [Metropolitana Nord](#) area also opened its channel and with the publication of 35 videos it has already reached 11,000 views.

The professionals narrate the history of the ICS in the **blog 30 anys, 30 veus**

The ICS celebrated its 30th anniversary in 2013 by collecting, in a blog, historical notes, photographs, experiences and anecdotes, told by the institution's professionals. The blog, with participation open to everyone, has had 70,303 views of its 81 entries and has sparked 48 comments.

The most valuable content of the blog, titled **30 anys, 30 veus**, was added by the accounts of 30 professionals from across the entire territory that have spent 30 years or more working in the company and that, through their experiences and memories, narrated in the first person, have sketched the institution's history. In addition to the interviews, the blog contains articles written by the professionals themselves, news, events, old photographs and other curious anecdotes through which the country's recent history has also been portrayed, with the ups and downs



of the democratic transition, neighbourhood protests, the tragedy of the Els Alfacs camp-site explosion, the terrorist bombing of the Hipercor supermarket and the Olympic Games.

The most visited entry, with 2,000 views, was the history of the Neonates Unit at the Vall d'Hebron University Hospital, followed, with 1,200 views, by the History of the Viladecans Hospital and, with a thousand visits, a historical timeline of the Vall d'Hebron from its inauguration in 1955 to the present day.

Launch of the [icsebre.cat](http://www.icsebre.cat) website

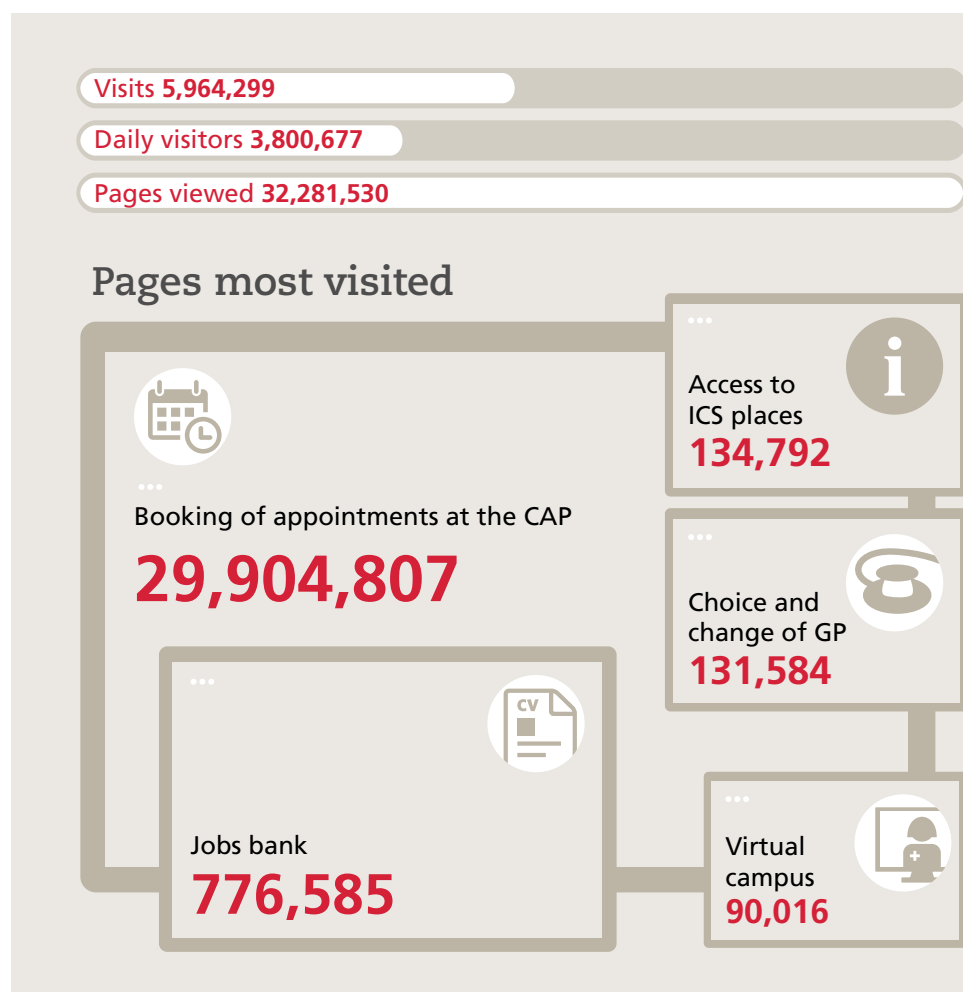
With the aim of putting within reach of the Terres de l'Ebre population a single site where they can consult all the information on the territory's primary healthcare services and the Verge de la Cinta Hospital in Tortosa, in the month of February the website www.icsebre.cat was launched. In addition, it facilitates access to external resources in order to carry out different procedures whether online or in person.

The website has received 154,402 visits, with a total of 402,745 page views.

The ICS website practically doubles its number of visits

In 2013, the ICS website spectacularly increased its number of visits, with a total of 5,964,299, an increase of 43.7% on 2012, due to the increase in visits programmed online, with almost 30 million views of the 32,281,530 total views of the website, and to the expansion on the site of the different information pieces linked from the different social channels on which the ICS is carrying out considerable activity.

The other most visited pages are the jobs bank, the access to information on professionals, choosing and changing GP via the Internet and the ICS virtual campus.



The file most downloaded from the ICS website was the file containing the **password request**, with **8,653** downloads.



Monday is the day that the ICS website receives the most visits. The views of all the Mondays of the year add up to **1,270,229**.



The time of day with the greatest frequency of visits is that between **10 a.m. and 11 a.m.**, which has totalled **453,045** views.

A Comarcal Council app for mobile devices allows geolocating of all the ICS centres in the Berguedà

The Comarcal Council of the Berguedà and the ICS have made available to users in the Berguedà the mobile app **Berguedà 24h**, which allows geolocation of the ICS primary healthcare centres and local treatment centres. This application, which offers general information on tourism resources in the district, has incorporated information on the healthcare resources that may interest users: opening times of centres and contact details (address, telephone or email address). The application is suited to iPhone and Android devices and can be downloaded free of charge.

► Major Investments and Facilities

Main investments in building work and replacement equipment

Building work

- Continuation of the building work on the new CAP Ronda Prim in Mataró.
Amount: 5.702.286,74 euros
- Phase III of Emergencies at the Germans Trias i Pujol Hospital.
Amount: 4.646.538,59 euros
- Continuation of the building work on the new CAP Bordeta-Magòria in Barcelona.
Amount: 3.360.850,74 euros
- Continuation of the building work on the new CAP Vilafranca del Penedès.
Amount: 3.304.054,41 euros
- Continuation of the building work on the new CAP Llinars del Vallès.
Amount: 2.115.858,21 euros
- Continuation of the building work on the new unified laboratory at the Vall d'Hebron Hospital.
Amount: 1.350.000 euros
- Continuation of building work on the CAP Santa Coloma de Cervelló.
Amount: 1.143.236,69 euros
- Construction of the new CAP Prats de Lluçanès.
Amount: 530.901,46 euros
- Continuation of building work on CAP Balaguer.
Amount: 147.048,18 euros

Replacement equipment

- Part of the equipment for the surgical suite at the Vall d'Hebron Hospital. Amount: 913.000,00 euros
- Diverse equipment for primary healthcare centres.
Amount: 662.110,55 euros
- Part of the equipment for the new Emergencies department at Bellvitge Hospital. Amount: 401.733,99 euros
- Equipment at the Dr. Josep Trueta Hospital in Girona.
Amount: 123.285,78 euros
- Equipment at the Arnau de Vilanova Hospital in Lleida.
Amount: 47.470,80 euros
- Equipment for the waiting room for the Emergency Department at Germans Trias i Pujol Hospital. Amount: 4.953,88 euros

New equipment

- Outpatient Consultations in Paediatrics, Gynaecology, Obstetrics, and Paediatric Day Hospital at the Arnau de Vilanova Hospital in Lleida
- Emergencies at the Germans Trias i Pujol University Hospital
- Clinical Laboratory at the Verge de la Cinta Hospital of Tortosa

- CAP Pujol i Capsada in El Prat de Llobregat
- CAP Rambla Nova in Tarragona
- CUAP Casernes de Barcelona
- Comprehensive Paediatric Care Centre Barcelona Esquerra
- CUAP El Prat de Llobregat
- Alfara de Carles Local Treatment Centre
- Circs Local Treatment Centre
- Nulles Local Treatment Centre
- Pinell de Brai Local Treatment Centre
- Organyà Local Treatment Centre

The Vall d'Hebron Hospital brings online its new energy cogeneration plant

The ICS has invested €5.9 M in the construction of a new energy cogeneration plant at the Hospital, made possible thanks to the collaboration agreement signed with the Institute for the Diversification and Saving of Energy (IDEA), a public company attached to the Ministry of Industry, Energy and Tourism, which is financing 100% of the cost of the operation, and the Catalan Energy Institute (ICAEN). This new cogeneration plant replaces equipment that was damaged in the fire of 2007.

Cogeneration consists of burning once a fossil fuel (natural gas), to obtain two different levels of energy: generation of electricity, firstly, which will be destined for the Hospital's own consumption, and the utilization, secondly, of the useful heat to produce steam for sterilization, heating and running hot water. In addition, the heat surplus will be used to produce cold through the absorption system, which will prevent the consumption of electricity normally used for air conditioning through the electric compression system.

The benefits of this new cogeneration plant reside not only in the primary energy savings, but also in the great value it offers to improve the power supply quality. Cogeneration allows the Hospital to remain in isolation; therefore, it is not affected by electrical network disturbances, for example, possible power outages. Thus, the plant is never without supply even when the electric current is cancelled for some reason.

Currently, the energy consumption of the Vall d'Hebron University Hospital generates a total energy bill of some €7.5 M per year, of which €2.9 M correspond to natural gas.



The new surgery block of the Vall d'Hebron General Area combines leading-edge technology with respect for the environment

The surgery block is the most important construction work currently taking place at the Hospital and will enable the incorporation of a total of 19 integrated operating theatres, 36 ICU bays and 20 recovery rooms in a total surface area of 10,300 m². Two of the operating theatres are hybrid rooms, i.e. they function as operating theatres and digital imaging rooms, where diagnostic testing and control can be carried out during surgical interventions.



With the new facilities, it is planned to cater for 40,000 appointments across different specialities.

The Arnau de Vilanova Hospital opens its Paediatric Day Hospital

This year the Outpatient Services in Paediatrics, Gynaecology and Obstetrics, and the Paediatric Day Hospital all started running at the Arnau de Vilanova Hospital in Lleida; these have enabled an increase in appointments from 14,000 to 40,000, in addition to providing better service and care for patients. These works have meant, in fact, a remodelling of the hospital's ground floor to be able to provide it with seven obstetrics and six paediatric consulting rooms as planned, as well as a paediatric day hospital, a common waiting room and nursing and services personnel hub.

With the new facilities, it is planned to be able to attend to some 40,000 appointments in different specialities: some 7,000 in obstetrics, 23,000 in gynaecology, 8,500 in paediatrics, and 700 in paediatric surgery.

Besides the work on the new Paediatric Day Hospital and the Outpatient Consultations Area, and as part of the same investment, other actions have been carried out such as the improvement and grouping of the area assigned to user admissions (269 m²), the remodelling of the entrance hall (507 m²) and the construction of new changing rooms (725 m²). The changing rooms are located in the building's basement and they represent also an improvement in terms of convenience for professionals working at the Hospital as they have capacity for 1,000 lockers.

New Emergencies areas start running at the Germans Trias Hospital, devoted to waiting room and the care of less serious patients

In December, the Germans Trias i Pujol University Hospital opened its new Emergencies areas, designed for attention to less seriously ill or injured patients, those who *a priori* are not expected to be hospitalised, have a low degree of dependency and can be discharged within a few hours. The spaces include, furthermore, a waiting room for all adult patients and their companions. They are situated in the zone where the old Accident and Emergency department used to be. This action covers the penultimate step for the complete remodelling of the service, which began in 2008, affecting more than 8,000 m² and will be completed with the setting up of the new Short-Stay Unit for Emergencies and the Medical Emergencies Service area.



Specifically, the new spaces have four offices for medical attention, one for nursing care, one for treatment that will be up and running in early 2014, and areas for coordination, secretaries and Emergencies supervision. As for the waiting room, it has capacity for a hundred people. With this step in the remodelling of the Accident and Emergency department, the 40 emergency care bay situated in the spaces opened in 2012 can now be destined exclusively to patients in a more serious condition. Furthermore, space and comfort is gained for those people waiting to be seen.

The entry into operation of the new spaces represents, moreover, an organisational change for the Emergencies staff, as now the first step in the classification of patients is not the medical or surgical speciality that must attend to them, but their degree of seriousness. This is made possible thanks to the recent implementation of the Andorran Triage Model (MAT) at the Hospital, where people arriving at Emergencies are seen on arrival by qualified nurses with specific training in this task. These nurses work with the support of a computer application that establishes priority and exhaustively records all steps followed. The procedure improves the response time in attending to patients in a more serious condition and the care circuits that the service operates.

Activity commences at the heliport at the Germans Trias Hospital

In April the heliport at the Germans Trias i Pujol University Hospital came into operation. This infrastructure is designed to receive patients transferred by medicalised helicopter who, in their majority, must be treated in areas such as intensive care, neurosciences, cardiology, and trauma. These are specialities in which, for greater coordination and speed in providing healthcare, Catalonia has established the heart attack, stroke, and polytrauma codes, respectively. The start-up of the Heliport has required collaboration between professionals from the Germans Trias and those from the Medical Emergencies Service (SEM).

The heliport is a new step forward in the consolidation of the role of the Hospital as a referral centre for the Barcelonès Nord and Maresme areas and for care for high complexity cases in these areas, and in some cases, for the comarcas of Girona and the Vallès areas. The possibility also exists of using it for patients who need to be transferred to other centres. The Germans Trias Hospital heliport is the ninth to be located at a hospital in Catalonia, and the first in the Barcelonès Nord area.

The infrastructure has been built on land very close to the hospital's new Emergencies department, so that patients can be transferred there in a short time. It occupies, in total, some 800 m² and consists of a platform constructed on a slope. The work also included the adaptation of the access route to Emergencies.

The new CUAP El Prat de Llobregat starts operating

The month of November saw the start-up of the new Primary Healthcare Emergencies Centre (CUAP) at El Prat de Llobregat, located at the CAP 17 de setembre, where it occupies a surface area of 776 m². The new centre is open 24 hours a day, every day of the year, and gives cover to a population of 64,352 inhabitants from the three basic health areas (ABS) of el Prat de Llobregat: Ramona Via, Sant Cosme and Pujol i Capçada. The start-up of this CUAP means the transfer of the continuing care that until now was carried out at the CAP Ramona Via.



Works are completed on the rehabilitation of the façade of the Corporate Centre

In the month of March, work was completed on the rehabilitation of the façade of the ICS Corporate Centre, located at the crossroads between Carrer Balmes and Gran Via de les Corts Catalanes, in Barcelona. The rehabilitation project has consisted of repairing several original pieces of the façade of the building and achieving maximum guarantees of safety for passers-by. The works began in the summer of 2012 and extended to six months.

The Catalan company Urcotex was the winner of the public tender organised by the ICS to carry out the rehabilitation, and the cost of the work, 195,993 euros, was financed totally with the advertising placed on the scaffoldings during the six months of work.

The CUAP El Prat is designed to provide immediate medical and nursing care aimed at case resolution; therefore, it is equipped with technically advanced equipment such as a simple digital direct x-ray service, an immediate blood-testing service, a cardiac resuscitation room, and a minor surgery room for dealing with sutures, wound dressings, and burns. It also has specific spaces, such as a waiting room for 48 people, four observation bays, four medical consulting rooms, one equipped with paediatric material, a pulmonary resuscitation bay also for critical patient care, and a box for nursing triage and acute resolution.

Tarragona opens a paediatric care centre on Rambla Nova

Since the month of October, Tarragona has had the Rambla Nova Paediatric Care Centre, located at the Plaça Imperial Tàrraco and managed by the ICS, which offers, concentrated into a single space, the primary healthcare paediatric services, which until now were provided at the CAP Tàrraco (Parc Sanitari Joan XXIII) and CAP Jaume I, and also the paediatric specialities of the Hospital Joan XXIII (neurology, psychiatry, nephrology, infectious diseases, digestive system, endocrinology, allergology, neonatology and dietetics).

The centre caters for a population of some 7,000 children aged 0 to 14 years and is open from Monday to Friday from 8 a.m. to 9 p.m. The care team is made up of six paediatricians, five nurses, and five user care professionals.

The ICS Terres de l'Ebre Clinical Laboratory opens new facilities

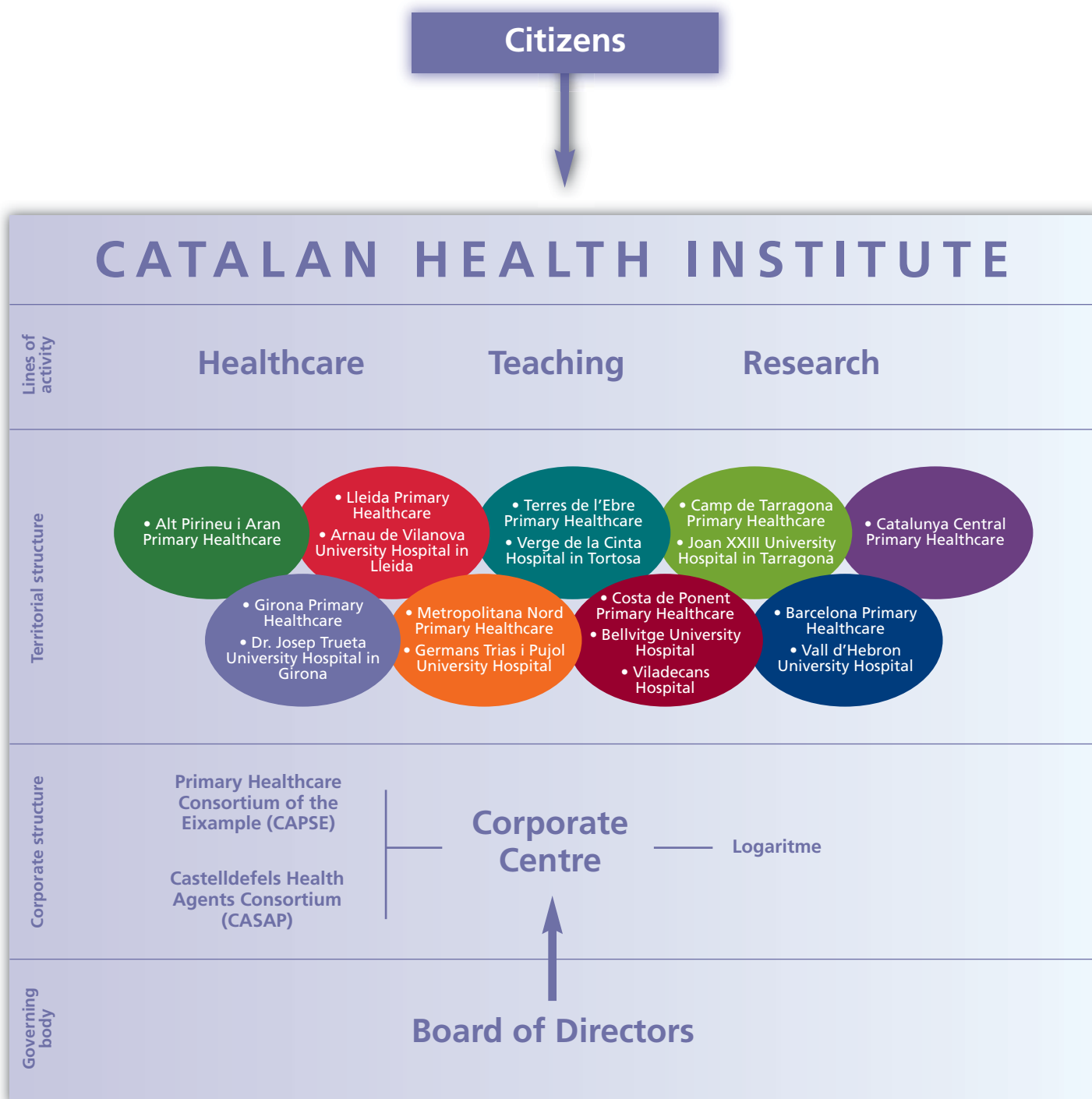
During the year 2013, the new Terres de l'Ebre Clinical Laboratory started running. It groups together services such as Clinical Analyses and Haematology and Haemostasis, which has meant a reorganisation and modernisation of the facilities.

It is located inside the Verge de la Cinta Hospital of Tortosa, occupies a surface area of 590 m² and gives a response to the support requirements for biochemical, immunology, microbiology, haematology, haemostasis, hematometry and cytology diagnostic testing, as well as emergency determinations, both for the Hospital and for primary healthcare.

As for its activity, it has experienced an increase that during the year 2013 reached 1,998,269 determinations, which means an increase of 4% with respect to 2012.



► Organizational Chart



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