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**Ribera Salud's  
contribution  
to the  
public healthcare  
system in Spain**

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ribera salud grupo

What is our  
— **direction?** —



We began our journey over fifteen years ago by focusing on innovation, flexibility, and best practices in the public healthcare system. During this time, we have developed public-private partnerships, have been the leader in innovation and have driven change by using the best healthcare practices.

### **Integrated Care Services**

We have developed new management models that utilize existing resources, avoiding duplication and ensuring quality service. Our patients have benefitted from our integration of different levels of healthcare services (primary and specialized healthcare) providing more accessible, complete attention, and faster access.

**Fast medical access**

### **Innovation and Progress**

With the implementation of Information and Communications Technologies (ICTs), we have achieved integrated and efficient medical procedures. These tools enable us to be transparent and agile when comparing the quality of our care programs. ICTs have improved communication between professionals and patients.

**Excellent health results**

### **Patient Focus**

We encourage health education, preventive, and self-care policies. Our quality procedures allow us to be more decisive, while improving services for our patients. We are the first company in Spain to develop a "Health Portal" which allows us to measure our effectiveness. The site allows us to conduct online consultations between our medical professional and the patient, provide online results, and reduce unnecessary primary healthcare visits. Our patients experience early diagnosis of certain diseases in health centers, creating a closer, holistic relationship with the patient.

**Better patient satisfaction**

### **Higher Quality and More Efficient Health System**

At Ribera Salud, we comprehensively manage the health of our patients in a transparent and results-oriented manner. Our model pursues the most effective use of resources to ensure we achieve the best possible outcomes. We are committed to clinical management, safety and incorporating new techniques of partnering with our patients. At Ribera Salud, we place special emphasis on preventive health and have developed protocols for chronic health conditions.

**Efficient cost management**

### **Professional Recognition**

Our medical professionals have a critical role in the organization. Ribera Salud developed an innovative Human Resource policy which rewards our professionals based on performance and our five pillars:

*Continuing education*

*Identifying, managing, talent and retention*

*Clinical research*

*Teaching*

*Professional careers*

These are the five policy pillars that contribute to our professionals' satisfaction and sense of belonging.

**Our professionals recommend working at Ribera Salud**



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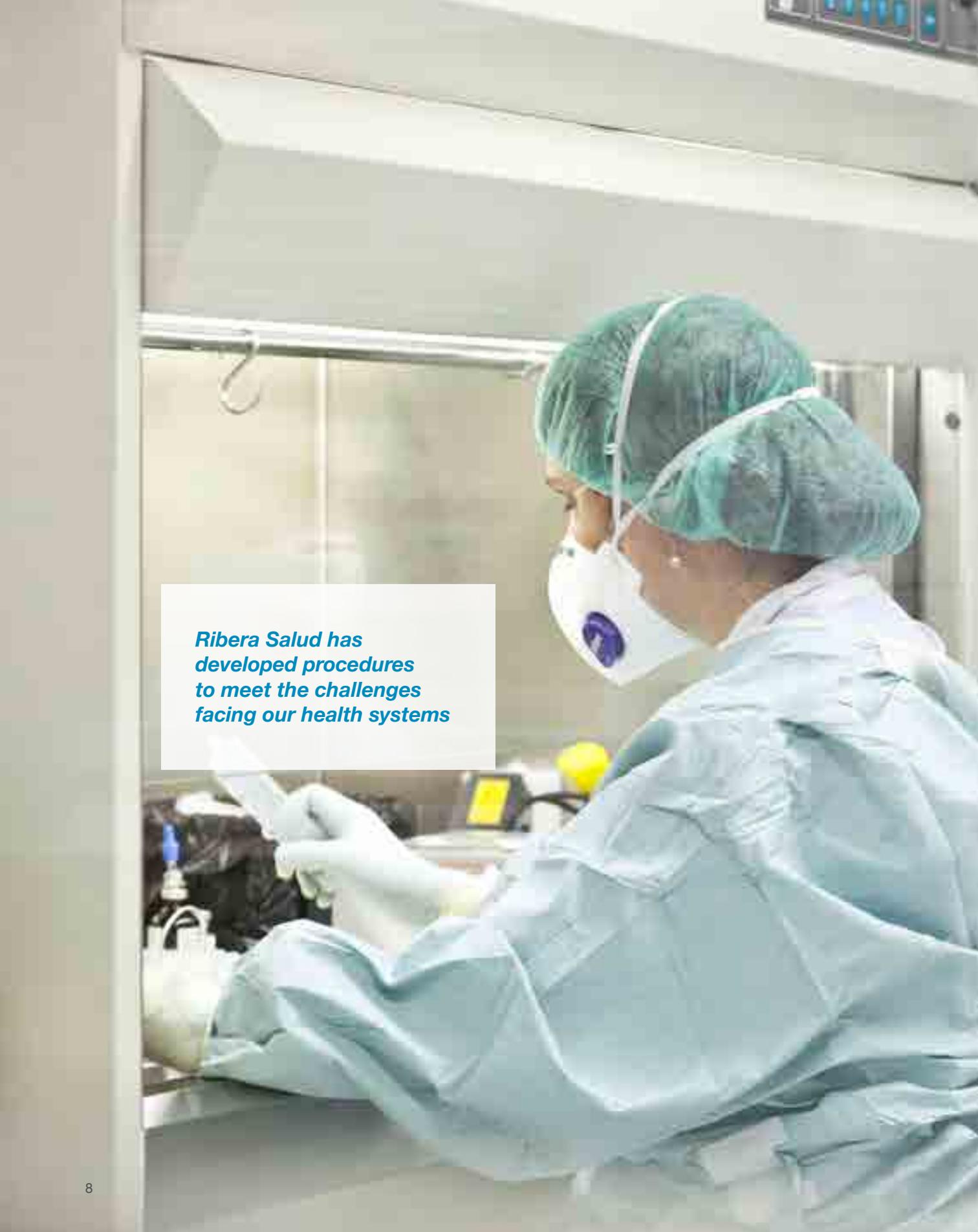




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## INTRODUCTION

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A healthcare worker is shown in profile, facing left, working inside a biosafety cabinet. They are wearing full personal protective equipment (PPE): a green bouffant cap, safety goggles, a white respirator mask with a blue circular filter, and a light blue protective gown. Their hands are gloved in white nitrile gloves. They are holding a white pipette tip. The biosafety cabinet has a stainless steel work surface and a glass front. In the background, there are various pieces of laboratory equipment, including a yellow container and a monitor. The lighting is bright and clinical.

*Ribera Salud has developed procedures to meet the challenges facing our health systems*

## Alberto de Rosa

*Chief Executive Officer*



One of the many opportunities provided to us by the Ribera Salud Management Model has been through the significant interactions we have had with foreign governments and their public health systems. At the same time, they have been studying our Management Model this has enabled us to learn from their experience and to resolve many of the challenges facing today's healthcare system.

It is tempting to have a regional vision and ignore the profound changes that are taking place in the healthcare systems of such advanced countries as the United States, the United Kingdom or Holland. We also need to look at those that aspire to make a qualitative leap into the future of other healthcare systems, such as Eastern and Central Europe or Latin America.

The sustainability of quality healthcare is a global issue. For this reason, there are an increasing number of healthcare leaders who believe a change in direction is needed. Many believe this will evolve from models that focus on the "providers of care" to models that focus on identifying and meeting the population's healthcare requirements in order to achieve the Triple Aim\* for healthcare systems:

- Improving the patient experience of care (including quality and satisfaction)
- Improving the health of populations; and
- Reducing the per capita cost of healthcare

\*The Triple Aim is defined by the Institute for Healthcare Improvement (IHI)

We believe these considerations share three elements: a system based on social justice and public values, the need for a sustainable system as a commitment to future generations; and the need to introduce high levels of expertise, professionalism, technology, and management. These are essential in order to successfully face the challenges posed by chronicity, new therapies, and drugs. We believe these are the goals that unite all healthcare systems around the world.

This report demonstrates the added value that Ribera Salud brings to public healthcare systems. Benchmarking and continuous improvement are among our values as an organization and are part of our promise to our long term partner the Public Administration. We apply best practices within our industry committing to provide excellent healthcare services to our patients, through our network of professionals who embody our Management Model.

We believe transparency is essential and all organizations that manage public resources must be transparent about their management system and results. This document is one aspect of our commitment to transparency.

We have presented our Management Model in many international forums and have shared our knowledge with various governments, universities, multilateral bodies, managers, and professionals interested in learning and studying our system. These meetings have led us to participate in international research which can be found in the reference section of this document.

As an international health care provider, we wish to share our experience and expertise. In this document we highlight data, statistics, strategies, research and analysis with the understanding there are many shades of gray. We present this information in the hope that it will promote open discussions and lead, in the future, to the creation of a governing body to objectively compare results among providers of care.

I would like to take this opportunity to thank IASIST and the Ribera Salud team for their contributions to this document.

I appreciate your interest in this report. I hope it will motivate the healthcare industry to continue improving quality outcomes, sharing new experiences and adapting to the requirements of a changing society.



## About us





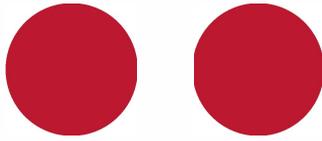
Ribera Salud is the leading healthcare management organization in Spain. Founded in 1997, Ribera Salud is the only company in Spain exclusively dedicated to the Public Private Partnership model (PPP) operating public private collaboration initiatives.

In the Valencian Community, we manage the integrated Health Districts of Alzira, Torrevieja, Denia and Vinalopó. In Madrid, we operate BR Salud, the management company of the Central Laboratory Service of San Sebastian de los Reyes which provides coverage for six public hospitals. We participated in the planning, construction, commissioning and consolidation of the Hospital of Manises (Valencia) and the Hospital of Torrejon de Ardoz (Madrid).

Internationally, we participate in the top two hospitals with PPP models in Latin America: Hospital del Callao and Hospital Villa Maria del Triunfo in Peru. Additionally, we are the technology provider for various public hospitals in Chile providing our proprietary electronic medical system, "Florence" and our b2b Salud system is an integrated purchasing and shared services platform.

In 1997, Ribera Salud developed a management system based on the foundations of the "Alzira Model" for Public-Private Collaboration in healthcare. The Ribera Salud model is based on quality assistance and promoting the population's health through innovative clinical strategies, recognition of the important role of the professional team, and a constant investment in technology.

Ribera Salud has tested procedures to cope with the challenges faced by developed health systems and these have been studied by various international forums and institutions. We are excited to share our experience in Spain, managing the concession of a complete healthcare system financed on a capitation fee per patient basis.





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**COMMITTED TO INNOVATION**

*Our healthcare management system*

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## Our healthcare management system

The Ribera Salud Management Model was developed for an integrated healthcare organization. Our model is based on a network of services that offer coordinated attention for the patients and caregivers in a specific geographical area.

We focus on their present and future needs, and are responsible for the costs and results. We provide assistance integration to improve quality and efficiency in all areas of our business. Since 1997, Ribera Salud has promoted an innovative organization of clinical processes and objectives for each level of assistance:

1. The integration between the Primary Care Physician and hospital care enhances continued care focused on the patient and their caregiver. Primary Care is the initial point of contact for assistance and care as it provides the patient with a closer relationship and a multidisciplinary approach.

To achieve this integration, Ribera Salud has developed a model based on Information Systems Technologies (ISTs), our medical professionals and a system of clinical management to promote quality and efficiency.

The medical records are shared electronically among the hospital, primary care physician and the patients. This information platform facilitates the continuity and longitudinally of care.

Liaison specialists in various areas (Internal Medicine, Mental Health, Nephrology, Cardiology, etc.) are assigned to the health centers.

The specialists utilize integrated health care processes and algorithms to aid in diagnostic and therapeutic decisions.

2. The hospital is an integrated part of the healthcare network. The “Hospitalists Model” is adopted as an important element of the organization structure which:

- a) Assumes coordination of specialists;
- b) Communicates clinical medical information to the patient in easy to understand terms;
- c) Ensures continuity of care and
- d) Coordinates on behalf of the family physician during hospitalization until the patient returns to Primary Care.

This model ensures continuity between different levels of care and is particularly suited for managing complex and fragile chronic geriatric patients during their hospital stay.

In the 2014 report entitled “Future Hospital Commission”, the London Royal College of Physicians called the “Hospitalist Model” an organizational evolution in the European medical services.

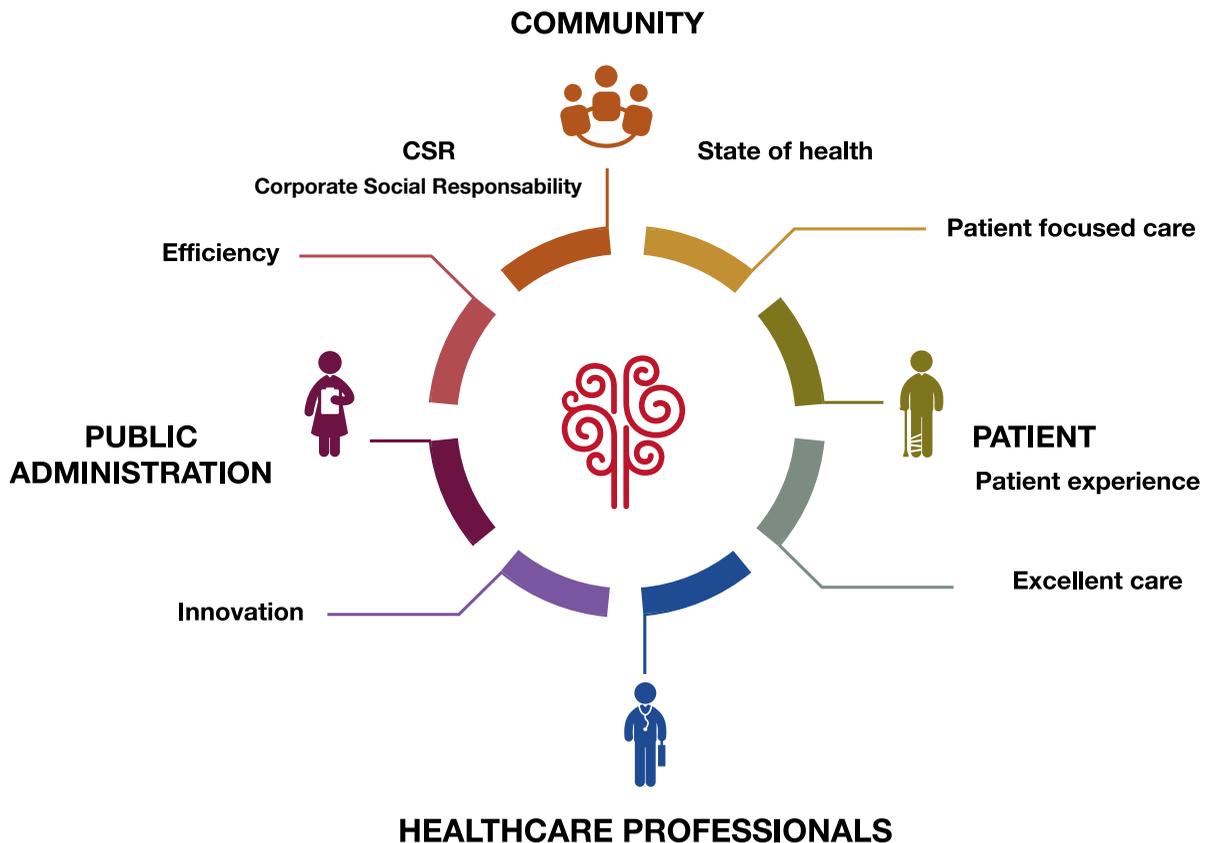
### 3. Partnership with the community:

Partnering with other organizations within the community, such as municipalities, associations and schools can provide a coordinated effort to promote healthy lifestyles and meet the healthcare needs within the community.

In 2012, Ribera Salud implemented a strategic plan to meet the needs of the healthy population as well as patients with chronic illnesses.

We have a 24 hour call center that assists patients when health issues arise. We use personalized care through our case management system for each patient addressing their individual needs. This system will result in home care if it is the best place for the patient treatment.

At the same time, remote monitoring is available for patients with heart failure and COPD. This is administered by the Home Hospitalization Unit and the patient family doctor or community nurse.



*Our objective is to implement a formula that consists of three elements: better health, lower costs and better care to improve the patient experience*

Nuria Mas. IESE Teacher





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## THE FUTURE IS NOW

*Population and healthcare status*

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## The future is now

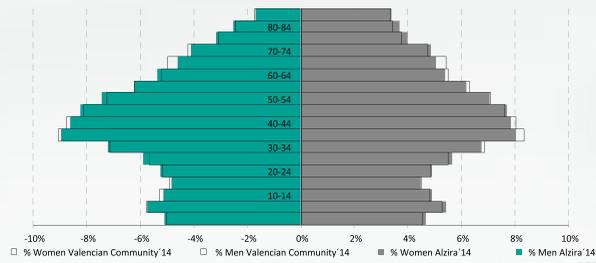
### **POPULATION AND HEALTHCARE STATUS**

Ribera Salud manages the health of individuals in 4 of the 24 Health Districts in the Valencian Community. This includes 701,311 residents or 15.2% of the community. The District of Alzira has almost one quarter of a million and those of Vinalopó, Denia and Torrevieja have populations of approximately 150,000 residents each.

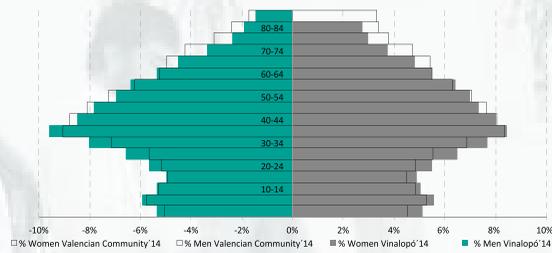
Studies have shown that health status is influenced by multiple variables including demographic, social, cultural, economic and environmental factors. As a result, we look at the characteristics of each district individually when considering their needs and the most appropriate way to administer healthcare.

There are significant differences in each district. Alzira has population demographics consistent with that of the entire Community. Vinalopó has a younger population, while Denia and Torrevieja have older communities due to the large number of retired residents as well as more seasonal movement.

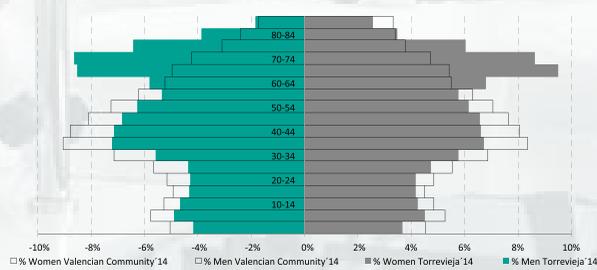
## ALZIRA



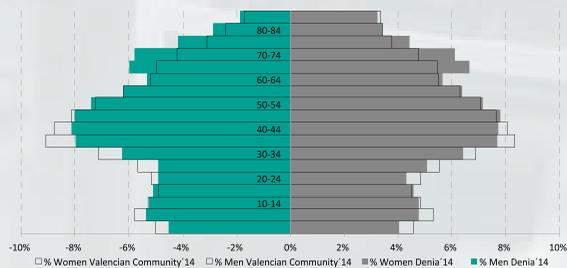
## VINALOPÓ



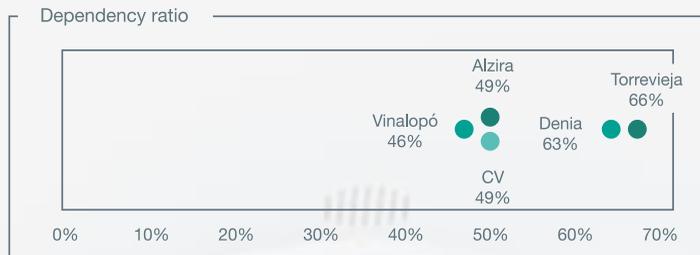
## TORREVIEJA



## DENIA



The population over 64 years of age with respect to the active population (between 15 and 64 years of age), measured by the level of dependence, is much higher in Denia and Torrevieja, 63% and 66% respectively in comparison with 49% in the Valencian Community.

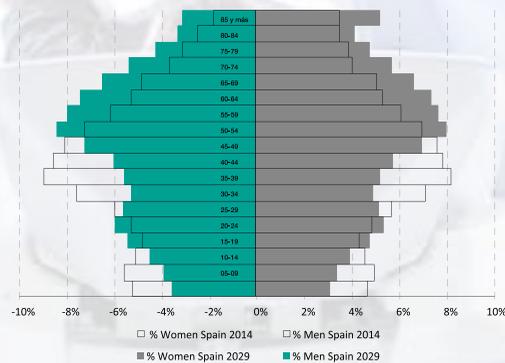


Source: Health Website of the Valencian Community

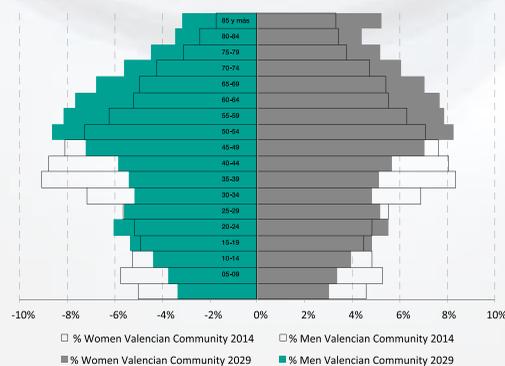
The following population pyramids reflect the projections by the National Institute of Statics (NIS) for the year 2029, based on the data of 2014, for both Spain and the Valencian Community. The image shows a trend towards an inverted pyramid, similar to the current situation in Denia and Torrevieja; as a result, the measures applied by Ribera Salud can be used as an example for managing an increasingly elderly population.

## COMPARATIVE POPULATION 2014-2029

### SPAIN

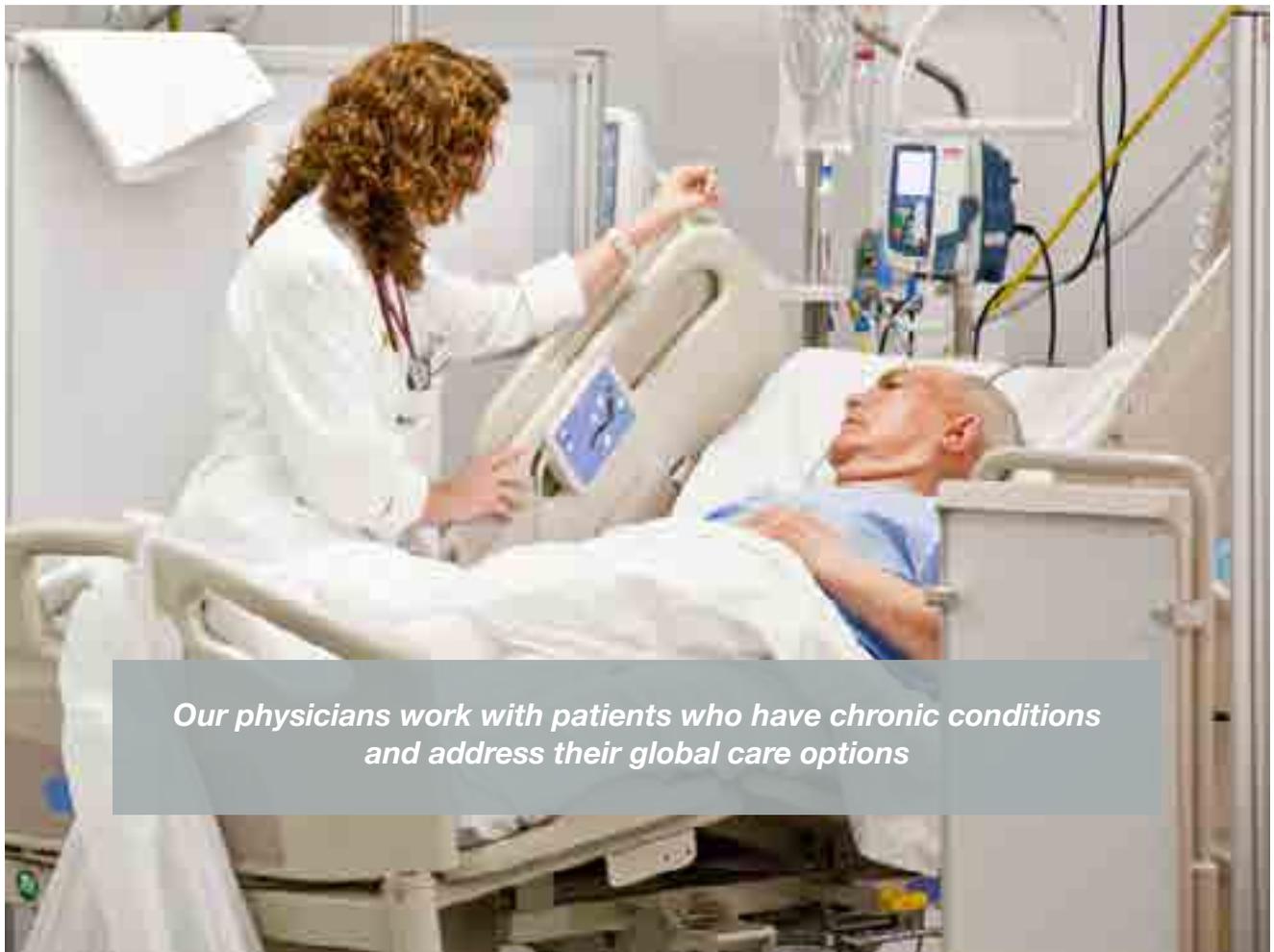


### VALENCIAN COMMUNITY



The current health of the population is difficult to determine. We use common standards for evaluation such as life expectancy. The population in the four districts has a life expectancy exceeding 80 years at birth. Denia and Torrevieja have an above average life expectancy of 85.3 and 86.5 years respectively.

***We are working on solutions to emerging health problems that impact our older and more dependent patients***

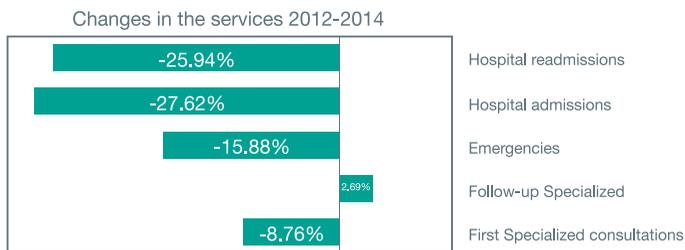


***Our physicians work with patients who have chronic conditions and address their global care options***

**The future is now: Results of the plan for complex patients in Torrevieja and Vinalopó  
(Center for Health Policy at Brookings, Washington)**

In 2012, Ribera Salud designed and launched the group's Plan for Chronic Patients program, a care plan for patients over 75 years of age with more than two chronic diseases, complex treatments, and exposure to multiple medications. In order to support these patients, Ribera Salud assembled a group of professionals including general practitioners, nurses, mental health professionals, and social service workers. We also offered domestic help with emphasis on technology which facilitated the identification and monitoring of these patients. One year later, the pilot program has grown to 4,539 patients.

**This experience was evaluated by the Center for Health Policy at Brookings, one of the most respected research entities in the field of health sciences in the United States. The results show a decrease of approximately 25% in the use of emergency rooms.**



Source: Reinventing Chronic Care Management for the Elderly. Mark B. McClellan – Brookings Institute. April 2015





## ***Excellence in processes***

The best method to measure the contribution of health services is to review results in terms of improving patient recovery.

We measure performance by evaluating outcomes/data comparing them with equivalent services provided to similar patients in our area.

## ***Proximity in Primary Care – Primary Care results***

The data of Ribera Salud was compared with our management agreements provided by the Department of Health (Alumbra). This data illustrates the Ribera Salud population has nursing and homecare consultations above 0.32 per resident in comparison with the 0.30 for the entire Valencian Community. It also shows lower number of frequent patients (2.78% vs 3.04%) and better control of cardiovascular risk factors (47.9% vs 39.8% in the Valencian Community).

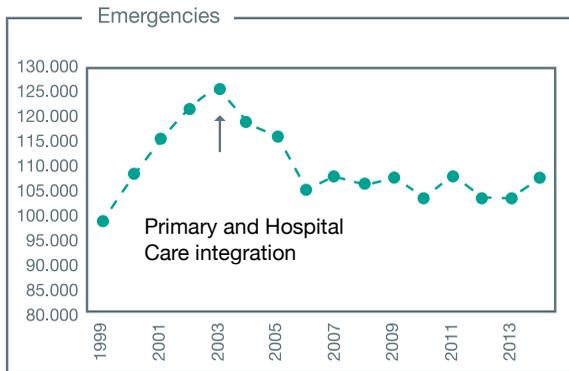
We use the Districts of Alzira and Vinalopó as references in flu vaccinations in people over 64 years of age. Individuals in Alzira and Vinalopó are more likely to have been vaccinated (60% and 68% respectively as compared to only 50% of the Valencian Community in 2014).

## ***Results of Healthcare Integration***

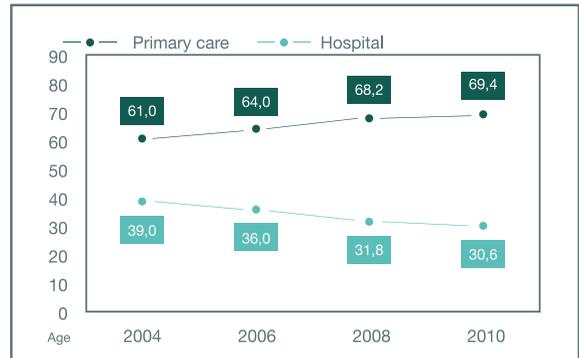
The integrated concession for health services management created by the Valencian Community transformed and improved care for the individuals we serve. The payment option of one capitation fee per individual incentivizes preventative care and has led to a reduction in hospitalization. In Alzira, integration was implemented in 2003 resulting in a reduction in hospital emergencies.

Patients now use health prevention and primary care instead of the emergency room or hospital visits.

## EVOLUTION OF EMERGENCIES IN RIBERA HOSPITALS



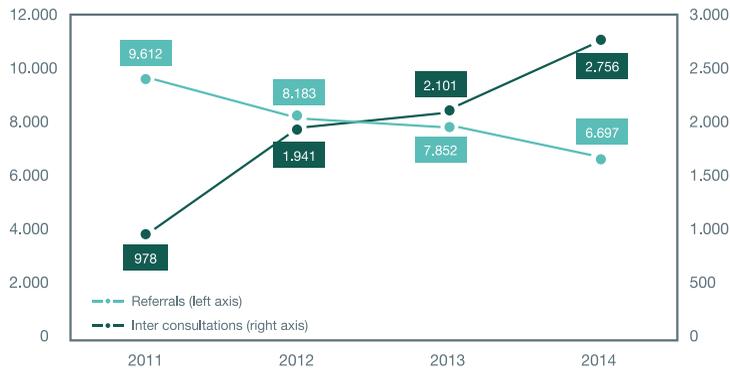
Source: R. Salud



Source: R. Salud

## ACTIVITY IN EXTERNAL CONSULTATIONS

With respect to the activity of external consultations, the possibility of remote inter-consultations between family doctors and hospital specialists has permitted a reduction in patient doctor visits. The example below shows specialist referrals related to the musculoskeletal system:

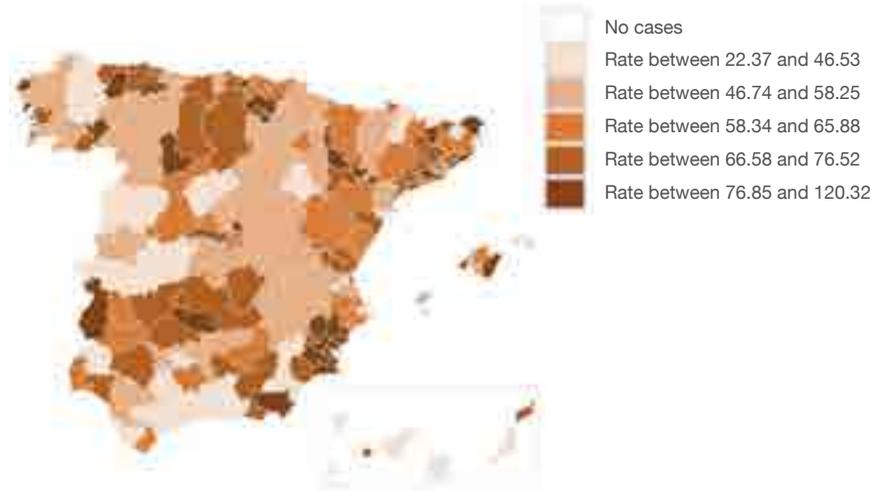


Number of primary care specialist referrals related to the musculoskeletal system. Source: R. Salud

*Ribera Salud has increased the healthcare offering to when and where it is needed*

Avoidable hospitalizations are an indirect result of primary care intervention and a direct indicator of effective first level care. When good prevention and care coordination is practiced we should expect an improvements in healthcare outcomes. It is important to have early interventions by Primary Care Physicians in order to help patients avoid an unnecessary hospitalization.

**The Atlas of Variations in Medical Care (Atlas VMC) illustrates that three of Ribera Salud districts had fewer admissions for chronic and high risk patients. Our strategic plan of care made this possible.**



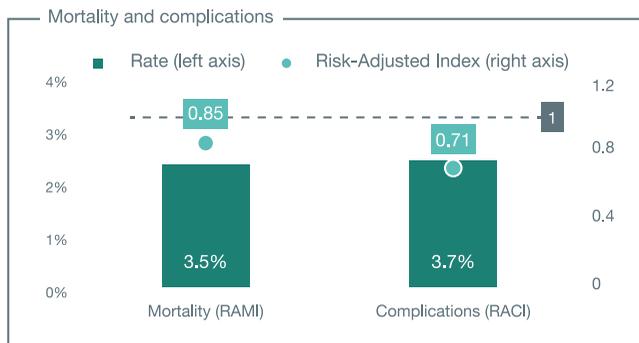
Standardized rates for age and sex of potentially avoidable hospitalizations for conditions that affect chronic or high risk patients. Data 2013 (\*Elche includes the two departments of health of Elche, Vinalopó Health Department and General Hospital from Elche). Source: AVPM June 2015

***An integrated healthcare system reduces hospital admissions of high risk patients with chronic diseases***

## Hospital Assistance Results

The results of hospital care in Ribera Salud have been evaluated and compared to a large number of data points from 183 Spanish public and private hospitals in order to consider the risk of individual patients (age, presence of various pathologies, etc.).

The levels of mortality and complications in the Ribera Salud hospitals are significantly better than average for patients with mortality and complication indices of less than one. The average and expected value is equal to 1.0.



In the Management Agreement with the district of Alumbra Ribera Salud highlights two results related with good practices. These are the Caesarean section rate in low risk groups and the rate of intervention in hip fractures after the first 48 hours. These outcomes are accompanied by shorter stays and the high use of Outpatient Surgery.

Mortality and complications  
Source: CMBD IASIST.

Additional data points measured include the average length of stay in Ribera Salud hospitals which are one day less than the average in the Valencian Community (4.82 vs 5.87) and the average pre-surgery stay in the hospitals of Ribera Salud which is 0.16 vs 0.6.

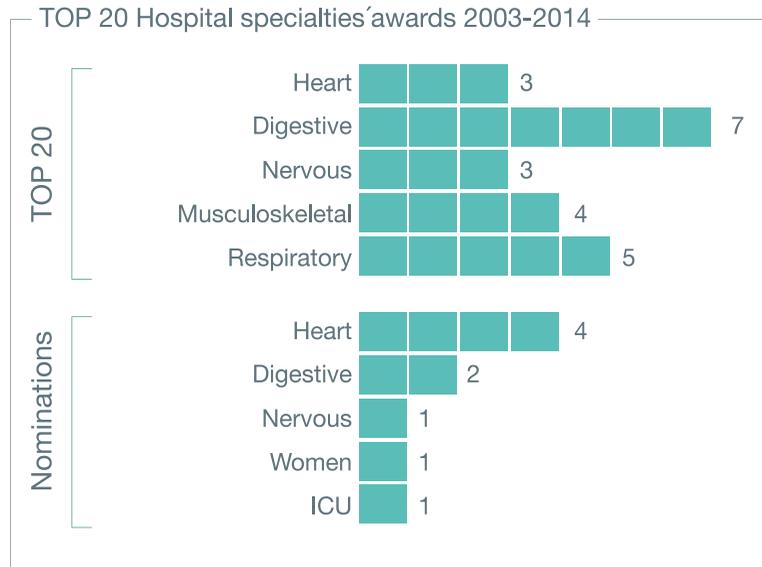
At the same time, the outpatient substitution rate is higher: 85.4% compared to 76.1% and Caesareans in low risk groups are better, 6.58% compared to 8.61% in the Valencian Community.

The rate of interventions in hip fractures after the first 48 hours is 23.9% compared to 51.4% in the community, with only 9.54% in the district of Torrevieja.

	Ribera Salud	Valencian Community	Relative Difference
Average pre-surgery stay (days)	0.2	0.6	↓ -66.7%
Outpatient Substitution Rate	85.4%	76.1%	↑ 12.2%
Caesarean Rate in low risk groups	6.6%	8.6%	↓ -23.6%
Intervened hip fractures after the first 48 hours	23.9%	51.4%	↓ -53.5%

Source: Conselleria de Sanitat GVA. Alumbra

Hospitals managed by Ribera Salud received 31 awards, including “TOP 20 Hospital” over the past 14 years. These awards further demonstrate the Ribera Salud Groups exceptional results in quality care, efficiency and productivity. Furthermore, Ribera Salud hospitals have received 22 TOP 20 awards in 5 clinical areas from 2003 to 2014.



TOP 20 Hospital specialties' awards. Source: Minimum Base Data Set (MBDS), Iasist.

Ribera Salud has been awarded with more than thirty official quality certifications and accreditations (see ANNEX III).

These awards reward the hospitals that show positive results.

## INNOVATIVE, INFORMATION AND COMMUNICATION TECHNOLOGIES

### Improve the health of the population

Electronic Medical Records implemented in every health center

Segmentation by Case Management

Digital clinical history, integrated and accessible to all those responsible for the health of the population.

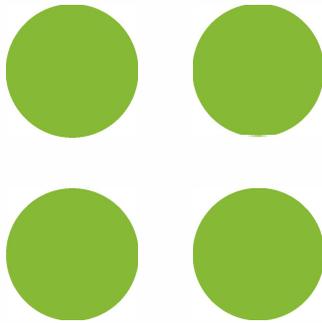
Development of clinical guides, alarms, scales, care plans for the Digital Clinical History

Each day, an average of 290 remote interconsultations are conducted between family physicians and our healthcare specialists.

On average, the information systems from Torrevieja and Vinalopó Health Departments send a text message to 2,265 individuals per day regarding their healthcare status, emergencies and confirming appointments.

***If you can't measure it, you can't fix it***

Institute for Health Care Improvement.





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**YOUR HEALTH COMES FIRST**

*Patient-focused care*

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## Patient-focused care

A basic principle of leading health organizations is placing the patient at the center of the organization. This principle is currently facing great challenges from a changing society. Today, individuals demand more innovative technologies that improve the speed delivery and quality of services. At the same time, the healthcare sector suffers from limited resources with which to deliver an acceptable level of care.

Ribera Salud has adapted to this new reality by responding to the needs of a more informed, more proactive patient. Patients want to be heard and interact with their medical professionals. The new technologies and their application in healthcare drive a conversion away from traditional systems and focuses on innovation. This has led to a new physician-patient role and a new role relationship.

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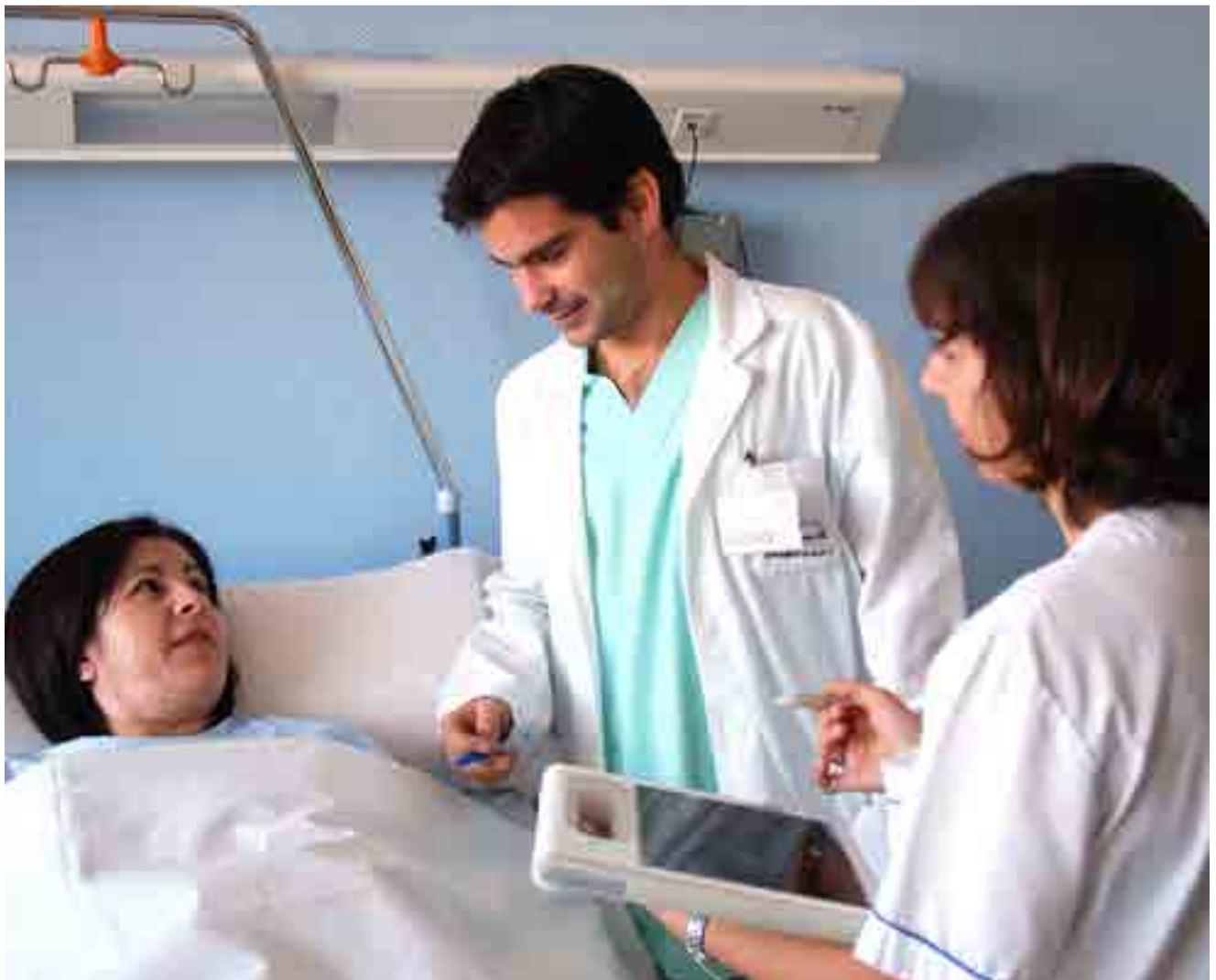
Communication plays an important role in planning, reporting and developing the activities included in the Health Promotion Plan. We use lectures and professional workshops, distribution of brochures, guides, magazines, and conferences with patient associations. We conduct town hall meetings and provide health information at schools. We develop a closer relationship with our patients by using new technologies and information systems.

The use of advanced technology is an opportunity to make communication more efficient and secure between the professionals, patients and organizations. The Ribera Salud Group and its hospitals have their own social network, including interactive websites, blogs, Facebook, Twitter, YouTube, LinkedIn and other communication channels, to reach our patients.

In 2013, Ribera Salud developed its pioneering strategy to increase the participation of patient interaction and delivery of health services. This technology provides new channels of accessing the healthcare system through innovative tools. As a result, the “Health Portal” and “My e-health space” allow patients from Torrevieja and Vinalopó Health Districts to manage their own health activities.

The Health Portal is the patients’ access point to their health history (i.e. test results), along with the ability to schedule and change their medical appointments. The Health Portal allows patients to securely interact with their family physician as well as other professionals responsible for monitoring their care.

In addition, the confidential Health Portal provides precise information for the monitoring and care of chronic diseases, which allows patients the chance to share the most relevant and current information regarding their conditions with their physicians.



## HEALTH PORTAL

### *Functionalities*

- Manage patient visits and tests, both for primary and hospital care
- Provides information on wait times at points of care
- Add relevant information such as personal background, monitoring data for chronic processes, reports from other providers
- Access discharge reports and laboratory results
- Communicate with physicians and nurses via secure mail and text messages
- Supply health advice and information from reliable sources

### *Results*

- 45,000 patients, representing 15% of the population actively use the portal. We anticipate a growing trend indicated by the European Commission (Strategic Intelligence Monitor on Personal Health Systems) for the increased use of e-health systems in the coming decades.
- More than 6,000 chronic patients input additional data which is shared with their family doctor.
- As a result of online consultations, face to face consultations with family physicians have been reduced by 5%.
- Since the launch of the website, more than 20,000 test results have been made available to patients, avoiding many unnecessary office visits.

Examples of our online health portal screens follow on the next page.



Torreveja Health Website  
[www.torreveja-salud.com](http://www.torreveja-salud.com)



Vinalopó Health Website  
[www.vinaloposalud.com](http://www.vinaloposalud.com)



**Mª Carmen Montesinos**

*Patient*

*"The support from new technologies to control my diabetes is proving fundamental. The doctor makes a schedule of the analysis, and from home I write the results in my user profile. If my glucose levels are high one day, my physician calls me right away."*

*(Las Provincias, May 2015)*

*Our patients have more ways to communicate with our professionals*



**Dr. Antonio Gil**

*Dr. Antonio Gil, Family Doctor and Coordinator of the Health Website of the Departments of Vinalopó and Torreveja*

*"Patients may access all information related to their health and well-being in a quick and comfortable manner, and can contact us directly"*

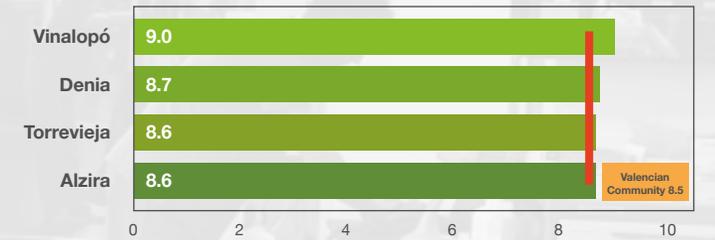
*(La Verdad, May 2015)*

The 2014 satisfaction surveys administered in a cross-sectional study by the Conselleria de Sanitat evaluated the patients' perceptions in hospital and primary care. They analyzed different aspects from the information received to the appearance, maintenance, and cleanliness of the facilities.

The overall satisfaction expressed by the surveys reveals that patients served by Ribera Salud are equally or more satisfied than the average patient in the Valencian Community.

In the case of perceived satisfaction in hospital care, Ribera Salud patients had a significantly more positive perception of services in obstetrics and pediatrics than in the Valencian Community.

## 2014 GLOBAL SATISFACTION OF HOSPITAL CARE



Source: Conselleria de Sanitat 2014.

## 2014 GLOBAL SATISFACTION OF PRIMARY CARE



Source: Conselleria de Sanitat 2014.

*The patients served by Ribera Salud are equally or more satisfied with the services they received*

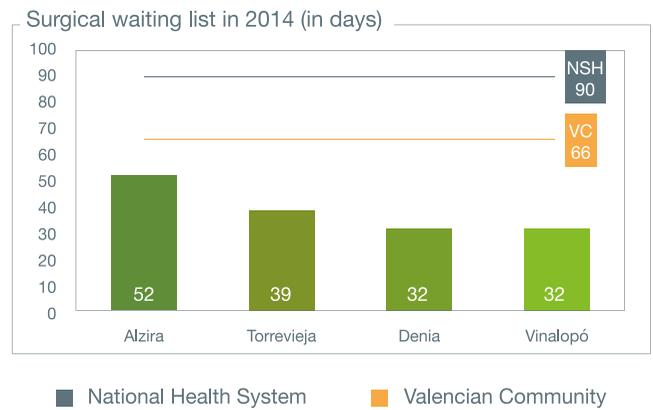
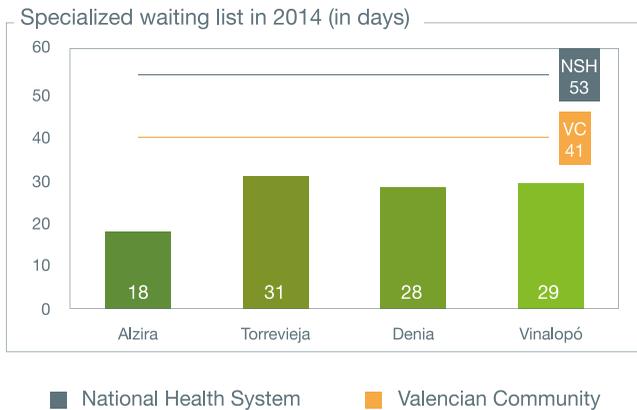
*Ribera Salud improves the health of its patients, offering healthcare at the right place and time*

Ribera Salud improves the health of its patients, offering healthcare at the right place and time. Our high level of satisfaction correlates with high patient loyalty, as noted by Remedios Calero in her doctoral thesis. Calero, Remedios “The behavior of patient loyalty: an analysis applied to the Alzira model, Valencia, Catholic University of Valencia, Faculty of Economics, Valencia, 2014.” In this thesis, Dr. Calero analyzes the loyalty of patients in the healthcare service in the Ribera Salud hospitals.

**Patients value health services that are quick and easy to access**

Dr. Calero analyzed various behaviors associated with loyalty, reaching the conclusion that the departments managed under administrative concessions by Ribera Salud “achieve better results given a certain number of patients assigned [...]. patients who were assigned to the concessions maintain strong ties, expressing little deserter behavior.”

We monitor patient wait times and the availability of care when it is needed. In 2014, patients in Alzira, Torrevieja, Denia and Vinalopó, had wait times of between 10 to 20 days less for specialized care than in the Valencian Community and the National Health System of Spain. They also waited between 13 and 58 days less for surgical interventions than other patients in the Valencian Community.



Source: Conselleria de Sanitat (Alumbra). National reference: Key Indicators from the SNS: INCLASS 2015

*Ribera Salud patients experience less wait time for physician visits and medical procedures*



*Patients receive highly complex care closer to home*

### THE VALUE OF OUR PORTFOLIO OF SERVICES

The services provided in the Ribera Salud hospitals include primary care and specialized care by the National Health System. The service is provided in the hospital or in reference centers determined by the healthcare planning Department of the Ministry of Health. These services include oncology, burn units, neonatal intensive care and pediatric cardiac surgery.

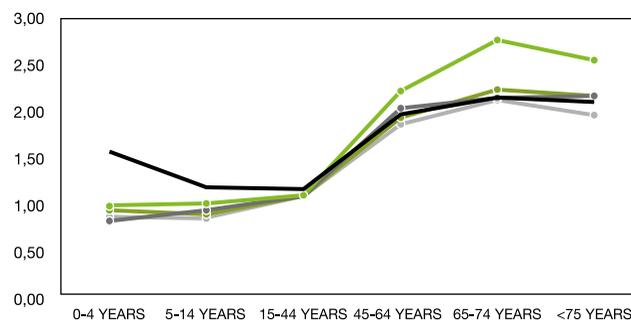
With an increasingly older population and a larger volume of chronic patients, the complexity of patients treated in the hospital is higher than the national average.

In addition, the complexity of patients over 45 years of age is above the average of the Spanish public network in three of the four districts managed by Ribera Salud. Complexity is lower in children under age of four due to the absence of neonatal intensive care, which is provided in reference hospitals.

The portfolio of hospital services at Ribera Salud is comparable to that of general hospitals. We have expanded with tertiary specialties, providing these services to patients who do not need to travel to reference hospitals. These services include Cardiac Surgery, Oncological Radio Therapy, Nuclear Medicine (PET-CT), Neurosurgery, Thoracic Surgery, Plastic Surgery, and Maxillofacial Surgery.

An example of this is the implementation of cardiac surgery in Alzira and Vinalopó given the relationship between the volume of activity and mortality. For the benefit of our patients, we maintain a high volume of cardiac interventions that are above that of many other hospitals in the National Health System by the National Cardiovascular Plan.

Overall complexity (GRD weight), mean by age group



Average complexity by age group (green and grey for concessions and black Spanish benchmark). Source: RS MBDS, Spanish Reference extracted from the database per Group Related by Diagnosis of the Ministry of Health, Social Services and Equality in 2013

## Patient comments



### Vanesa Girona

*"The maxillofacial surgery service at Hospital Vinalopó has solved the problems I had chewing, my difficulties with speech, and the aesthetic issue. However, the latter was the least of my worries".*

*(Información Newspaper, June 2015)*

### Elena Lacob

*"I had a very serious injury. My back had an angle of 135 degrees. The team showed me they were confident and I decided to have the surgery. They straightened my back and today I'm very happy".*

*(Información Newspaper, June 2015)*



### Inmaculada Andreu

*"The medical team performed a triple coronary bypass during my pregnancy. The risk was extremely high. In the end my daughter was born without any complications".*

*(Información Newspaper, June 2015)*

## NUMBER OF BYPASS OPERATIONS

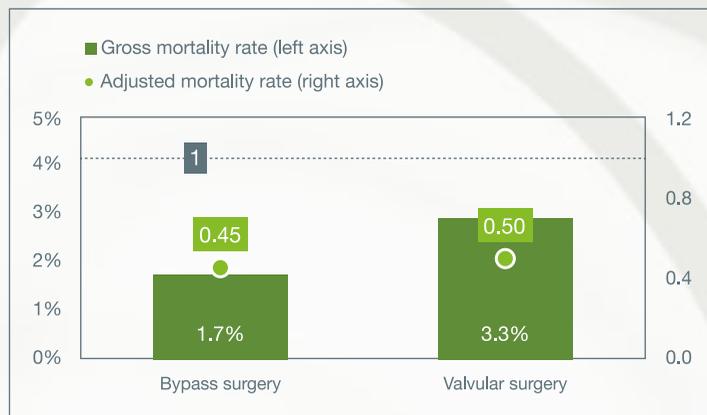


Number of bypasses. Source: Minimum Base Data Set (MBDS) of 29 hospitals.  
[www.semicyuc.org/temas/investigación/registros/ariam](http://www.semicyuc.org/temas/investigación/registros/ariam)

These volumes of activity are accompanied by levels of mortality adjusted by patient risk that are below those expected in similar patients in Spanish hospitals.

The rate of hospital mortality due to myocardial infarction (ARIAM record), in the Ribera Salud concessions in 2013 is 4.5% compared to 8.0% in the Valencian Community and 7.3% in Spain.

## MORTALITY RATE AND RISK-ADJUSTED MORTALITY INDEX (RAMI)



Mortality in Bypass and Valvular Surgery 2014. Source: CMDB of 29 hospitals

A mortality index (RAMI) less than one indicates an observed mortality rate lower than expected. The expected rate is calculated with a statistical model taking into account inpatient, episodic and hospital characteristics. The dashed line reflects the observed result is the same as that expected.



## INNOVATIVE, INFORMATION AND COMMUNICATION TECHNOLOGIES

### Improved care

Interactive-consultations

Empowerment of the patient through various self-service tools ranging from on-line monitoring the status of emergency services online to interaction between the patient and their family doctor in chronic processes

Reduction of clinical variability due to the introduction of processes and guidelines for systems

Remote monitoring and assistance for patients

*Ribera Salud was the first organization in Spain to provide one of its hospitals with a digital integrated clinical history*

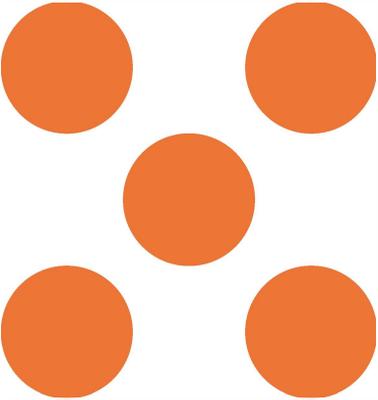
## An example: *Online labor rooms* (<http://paritoriosonline.com>)



Interactive websites as well as apps for smartphones and tablets are designed to improve accessibility to the maternity service of Torreveja and Vinalopó. Thirteen months after launch more than 16,000 visits have been made to the site.



Ribera Salud has developed an app compatible with mobile devices which allows personal follow-up during and after pregnancy.





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**WE DO MORE WITH LESS**

*The value of efficiency*

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## The value of efficiency

We are committed to provide the best quality of healthcare at the lowest cost. This is a challenge in today's environment where the population has more health concerns and patients have greater needs. This opportunity means Ribera Salud continues to focus on one of its core values, to provide more affordable healthcare options.

Our cross-functional teams work collaboratively to provide the best health care for all patients while managing costs. The best measurement of efficiency is the cost per member of the population. This can be compared with other areas in the country and provides an independent evaluation of efficiency in healthcare delivery.

The capitated payment received by Ribera Salud in the Valencian Community includes the entire portfolio excluding for prosthesis, pharmacy prescriptions, home oxygen therapy and non-medical transport. At the same time, Ribera Salud provides funding for investment and technological renewal of equipment and state of the art medical services.

It is important to know that in the Valencian Community, patients have the ability to choose their preferred center in which to receive care.

In cases where the patient is assisted by other health care facilities, the Department invoices Ribera Salud for 100% of the annual price contracted by the Law of Fees in the Valencian Community.

Consequently, Ribera Salud invoices the Health Department for the activity performed on patients from other areas at 80%-85% of the price from the Law of Fees.

Profitability of Ribera Salud is limited by contract to a maximum Internal Rate of Return of 7.5% any excess profit must be reinvested in expansion of facilities and enhancements to medical equipment.

### Ribera Salud study: Contribution to the efficiency of the Healthcare System

Ribera Salud has calculated the average cost per patient based on data from the Direcció General de Assistència Sanitària.

#### COST PER PATIENT SUMMARY FOR 2014

Departments	Health cost per patient
Direct Management	1,332.98€
Under district	824.23€ (-38.17%)
Under district with Ribera Salud participation	815.47€ (-38.82%)

Source: Direcció General de Assistència Sanitària. Conselleria de Sanitat GVA. Elaborated by Ribera Salud. Accumulated data from 2014

#### COST PER PATIENT PER DISTRICT FOR 2014

	Torreveija	Vinalopó	Alzira	Denia	Total Districts Ribera Salud	Manises	Total Districts	Other Direct Management Departments
Covered Population Information System (SIP) 2014	157,269	148,524	248,893	150,473	705,159			
Population Information System (SIP) Total 2014	182,397	153,524	259,903	165,184	761,008	201,819	962,827	3,992,789
	Torreveija	Vinalopó	Alzira	Denia	Mean Districts Ribera Salud	Manises	Mean Districts	Other Direct Management Departments
Capitated amount	680.17 €	680.17 €	680.17 €	680.17 €	680.17 €	680.17 €	680.17 €	
Capitated amount, items excluded	303.08 €	273.88 €	278.47 €	270.55 €	281.50 €	286.67 €	282.53 €	
<b>Total cost per patient</b>	<b>847.80 €</b>	<b>922.98 €</b>	<b>918.03 €</b>	<b>866.05 €</b>	<b>888.71 €</b>	<b>925.88 €</b>	<b>896.15 €</b>	<b>1,332.98 €</b>
<b>Cost per patient (minus amortizations)</b>	<b>806.45 €</b>	<b>856.24 €</b>	<b>877.36 €</b>	<b>814.48 €</b>	<b>838.63 €</b>	<b>880.20 €</b>	<b>846.95 €</b>	<b>1,332.98 €</b>
<b>Cost per patient (minus amortizations and financial charges)</b>	<b>784.07 €</b>	<b>827.79 €</b>	<b>861.11 €</b>	<b>788.91 €</b>	<b>815.47 €</b>	<b>859.27 €</b>	<b>824.23 €</b>	<b>1,332.98 €</b>

Source: Direcció General de Assistència Sanitària. Conselleria de Sanitat GVA. Elaborated by Ribera Salud. Accumulated data from 2014

All healthcare costs, including primary and specialized care and administration are included in the capita amount.

Endoprosthesis, exoprótesis, prescription pharmacy, transport and ambulatory oxygen is excluded capita amount to make this data comparable.

In Ribera Salud concession districts, the capita amount allocated to depreciation costs and financial expenses are included (because such expenses are used almost entirely in financing investments).

Appendix I includes all the cost calculation criteria.



***Results - outcomes and cost risk-adjusted – must be measured***

Michael Porter, Professor Harvard Business School

***Contribution to the efficiency of the Health System: published studies***

A large number of studies have been published comparing the cost per capita in the Districts of Valencia and the National Health System . Two of these are listed below. (Carlos Arenas, Dpto.Orihuela Manager and Vocal SEDISA Board, Efficiency of administrative concessions health in the Community Valenciana; Luis Fidel Campoy Domene, Josep Santacreu i Bonjoch, “The public partnerships Private under the National System Bless you. The special case of the Valencian model purpose of granting Denia”).

These studies show lower cost in the Ribera Salud districts versus the benchmark hospitals analyzed, with results ranging from 23% to 31% less.

***Ribera Salud patients receive equal or superior results with lower costs to the community***



At Ribera Salud, we review our internal efficiency as well as comparing the cost per patient by benchmarking different organizations and management models. In doing this we identify areas for improvement in both public centers as well as direct and indirect management systems.

It is worthwhile highlighting two studies; The first study was conducted by IASIST based on the analysis of the configuration management database (CMDB) of 78 Spanish hospitals, divided into two categories; “direct management of centers” versus “other forms of management.” Other forms of management include Foundations, Consortia, Hospitals using a PFI model and PPP Concessions.

The results of the IASIST study shows that hospitals with management systems in areas other than administration show greater efficiency and productivity, shorter patient hospitalization and higher intensity of surgery with no difference in quality indicators.

The second study was the subject of Antonio Clemente Collado’s 2014 doctoral thesis, “Analysis of the efficiency of hospital management in the Valencia Community influence of the management model.”

## COMPARISON OF KEY PERFORMANCE INDICATORS DEPENDING ON THE HOSPITAL MANAGEMENT 2013

INDICATORS	GDA group Self-managed hospitals	OFG group Hospitals with other forms of management	Diff (%)	P-Value
<b><i>Appropriateness</i></b>				
<b><i>Risk-Adjusted Surgical Outpatient Index<sup>1</sup></i></b>	1.08	1.22	13.6%	0.000
<b><i>Indicators of hospital efficiency</i></b>				
<b><i>Risk-Adjusted Length of Stay Index<sup>2</sup></i></b>	1.02	0.86	-15%	0.000
<b><i>Indicators of economic efficiency</i></b>				
<b><i>Product cost adjusted by product line<sup>3</sup> (€)</i></b>	3,142	2,301	-26.8%	0.000
<b><i>Productivity (production units / healthcare staff FTE)<sup>4</sup></i></b>	34	47	37.3%	0.000

**GDA.** Self-managed hospitals. **OFG.** Hospitals with other forms of management. Source: IASIST 2014 evaluation results of hospitals in Spain according to their management model.

1. Rate of Surgery without Adjusted Hospitalization is the ratio between the number of observed surgeries without hospitalization and the number of expected surgeries without hospitalization. A rate above 1 shows a higher amount of surgeries without hospitalization than expected.
2. Risk-Adjusted Stays evaluates the ratio between actual and expected stays for each episode in each individual.
3. Adjusted cost of production by product line. This indicator relates to the costs of a hospital and medical product costs incurred in its management.
4. Productivity (hospital production units/medical staff). This indicator relates the total production of a hospital and the number of healthcare workers employed for its development.

The study by Clement concludes, “The complexity of concessions is higher compared to the average centers managed directly; the concessions make more efficient use of beds (with average shorter stays) and more intensive use of alternative care as opposed to conventional hospitalization (i.e. with a better rate of ambulatory

care for surgical procedures); the results of a scientific and technical nature measured in the management agreements is better than those for direct management; and the delays in outpatient clinics and for surgery are less.”

## INNOVATIVE, INFORMATION AND COMMUNICATION TECHNOLOGIES

### Management support

Algorithms improve and assist with decision making, facilitate diagnosis, treatments and optimize the use of resources

Ribera Salud has developed analytical solutions that integrates healthcare, economic, human resource and quality results and permits all healthcare professionals in the organization to view performance with objectives in real time

Cost analysis is performed through an Activity Based Cost (ABC) model

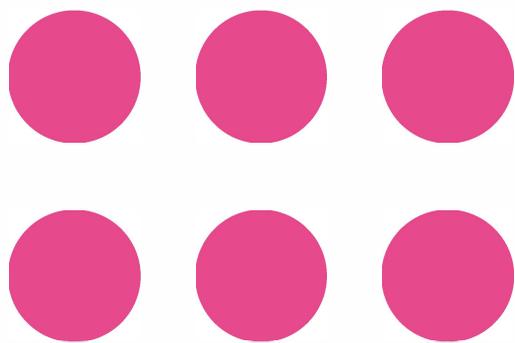
Knowledge is shared through the corporate social network

Each professional receives up-to-date results and a scorecard for their area of responsibility as well as a full report regarding their personal results.

All employees have access to the corporate social network and the employee portal. They also have collaborative tools that allow them to exchange information in real time.

***A health system needs reliable information to be effective. All health systems have sources of waste. But without reliable information which allow us to adjust priorities, adapt the strategies and measure results, costs increase significantly***

Dr. Margaret Chan, General Manager of the World Health Organization





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## WE RELY ON OUR TEAM

*The value of our healthcare professionals*

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## We value our professional team

Ribera Salud provides an excellent working environment for our team to treat patients and achieve improved health outcomes. We provide all the necessary tools, training and personal development for our healthcare professionals, so that they can provide the best experience for our patients.

Our management system is focused on five principles:

### 1. Integration of professionals:

We employ more than 6,200 corporate employees and civil servants. These professionals work collaboratively, while sharing common objectives for healthcare, efficiency, human resource management, policies, training, and professional development.

### 2. Stability:

Through our collective agreement we offer at least 85% of our workforce a fixed-term contract. Currently, 89.6% of the employees have a fixed-term contract.

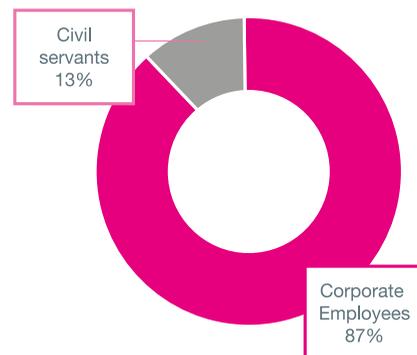
### 3. Recognition and compensation:

Our compensation model is based on the principle of Pay for Performance (P4P) where compensation is based on the contribution of each professional towards our organizational objectives.

Pay is structured in a fixed amount plus variable incentives. Using variable pay, we incentivize and reward outstanding contributions. Currently, our base pay is equal to that received by staff working for the Department of Health.

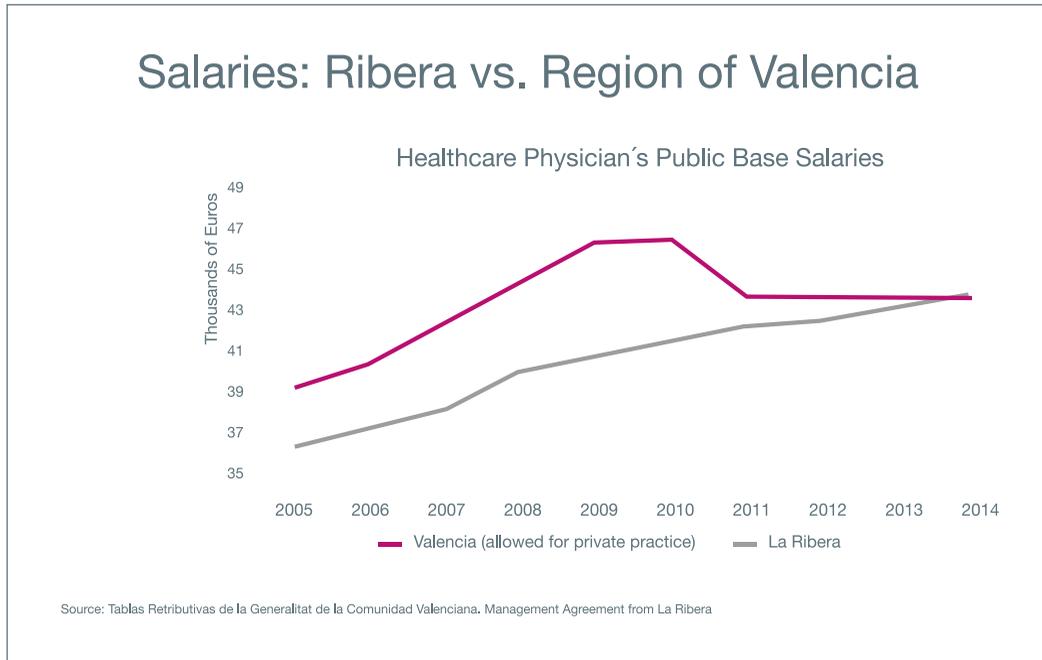
In a time of economic hardship across Spain, Ribera Salud has been able to increase wages as agreed to in our collective agreements. We have done this while managing reductions in revenue due to population decreases through our excellent systems and implementing cost reduction measures requested by government authorities.

Staff distribution



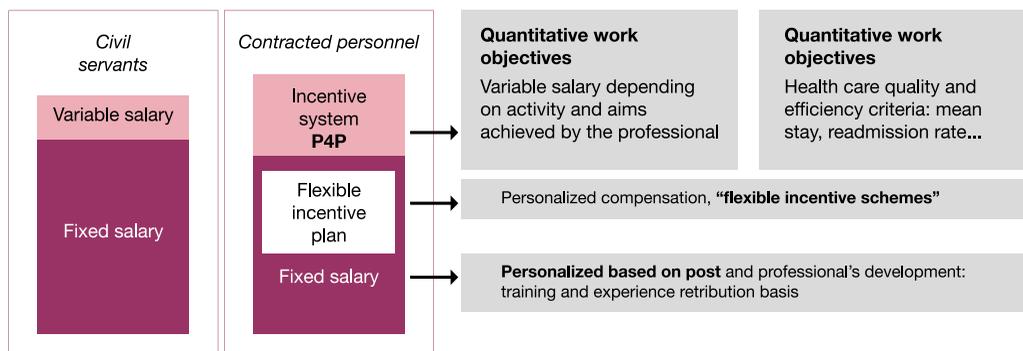
Source: Ribera Salud

Study conducted in 2015 by the University of California, Berkeley: “Doctors salaries and P4P: Review of La Ribera evidence”, Richard Scheffler (UC Berkeley); Jed Friedman (WB); Miguel Figallo (IESE)



The base salary paid to Ribera healthcare professionals in 2014 was slightly higher than salaries at a self-managed hospital. The graph shows increasing salary trends, which will continue without any external changes.

Even with this shift, the compensation model at Ribera Salud has maintained the composition of its wage structure, which supports Pay for Performance (P4P) as an effective way to reward the performance of our professionals. The chart below reflects Ribera Salud corporate employees compared to the public sector staff.



Source: Ribera Salud

Our incentive system is based on the achievement of quality care and efficiency objectives. Various weightings are applied within the total annual compensation based on professional classifications.

Each classification maintains various weightings within the total annual compensation, (i.e., the incentive for physicians is 35%).

#### 4. Professional development:

Professional Development is based on the five policies reflected below that use the knowledge, skills, and experience which a professional acquires during their relationship with our organization. Professional training is primarily funded by the Company.

- In 2014, Torrevieja and Vinalopó implemented a continuous training program “Growing uP!” educating 130 intermediate managers. A blended learning format was used consisting of 115 hours of management courses, workshops, and strategic meetings.
- Ribera Salud has University centers that conduct.
- Undergraduate and postgraduate training.
- We offer our physicians postgraduate physician training in many specialties: Alzira 17 specialties; Torrevieja 7 specialties; and Denia 5 specialties. Currently, there are 147 medical professionals within our workforce who are completing their residencies in these specialties.
- In 2013, Ribera Salud launched a specific program for the identification, management, and development of talent based on performance evaluations.

Selected professionals receive a personalized plan financed by Ribera Salud that includes external training and coaching. We manage internal promotions and succession planning using this personalized plan. Since inception, 35 employees have benefitted from this system.

• In 2014, the Clinical Research Ethics Committee approved 54 projects in Alzira, Vinalopó, and Torrevieja. The Research Committee approved 143 projects in the three concessions which included 120 publications in prestigious journals.

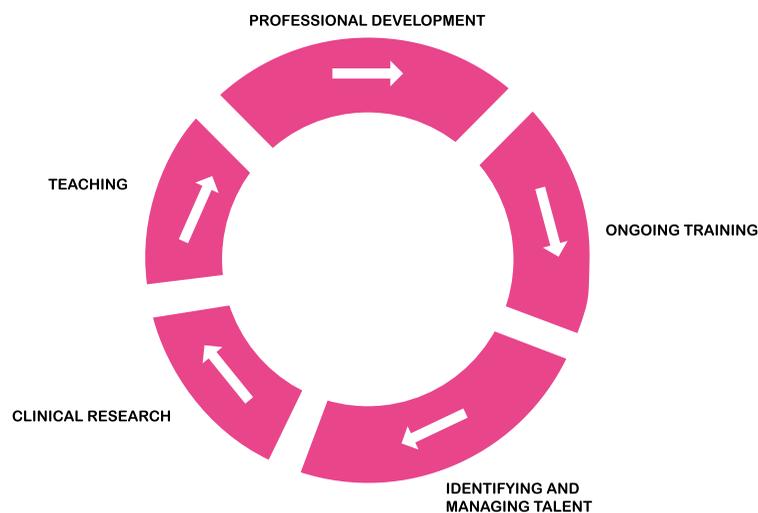
• In 2014, Ribera Salud invested 4.5% of total expenses in professional development for the concessions of Alzira, Torrevieja, and Elche.

#### 5. Healthy working relationship:

• Equality plan: Unanimously approved by the union representatives this plan guarantees equal opportunities and promotes a balance between the personal, family and professional life of all employees.

The Ribera Salud Group was recently recognized as one of the 100 best companies to work for according Actualidad Económica (XVII edition, 2014).

b. Job satisfaction surveys: we conduct a biannual employee satisfaction survey, analyzing results and developing specific action plans based on feedback received. In these surveys we evaluate commitment to the organization, loyalty, teamwork, and patient care with similar healthcare companies.



Source: Ribera Salud

**THE OPINION OF A PROFESSIONAL**



Dr. José Marcelo Galbis, Head of the Thoracic Surgery Service. Coordinator of the Respiratory Area of the University Hospital La Ribera and Vice President of the Spanish Society of Thoracic Surgeons (SECT):

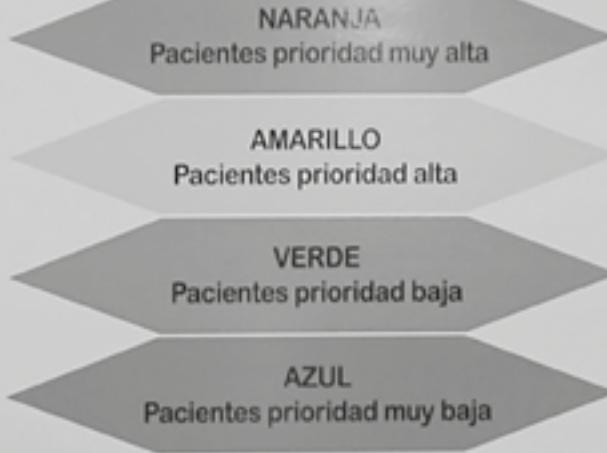
*“This is a dynamic, flexible model that is adapted to the needs of the moment, with constant recognition and supports the work of both individuals and their teams.”*

(Salut i Força, April 2015)



Source: Actualidad Económica Magazine's Translation (August 2015)

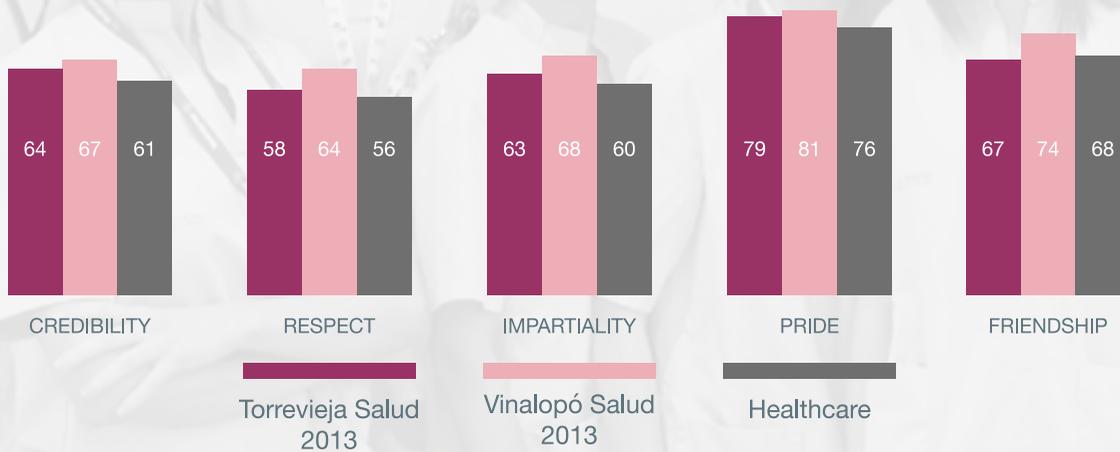




## PROFESSIONAL SATISFACTION AND SENSE OF BELONGING

The results of these five principles were evaluated by our staff's and show their satisfaction, commitment and sense of belonging to the organization.

The results obtained by Torrevieja and Vinalopó -Elche in 2013 in the survey "Great Place to Work" show a higher level of satisfaction of employees compared with other healthcare organizations that participated in the same survey.



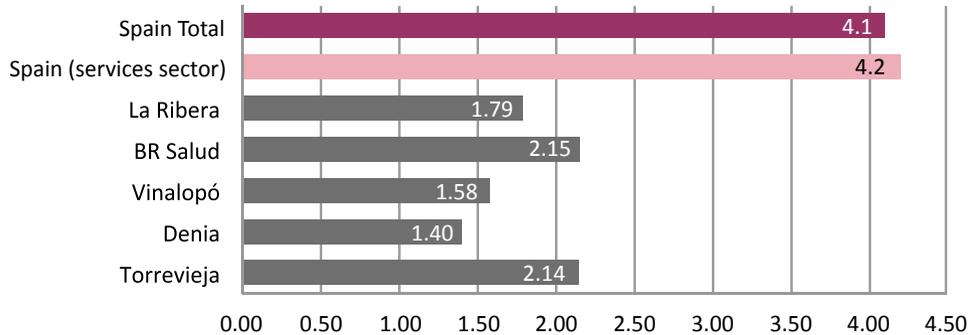
Source: Great Place to Work

<b>TORREVIEJA</b>			
<b>Top 10 positive comments regarding the best companies in the same sector 2013</b>			
<i>Difference</i>	<i>2013</i>	<i>Health care sector</i>	<i>Area</i>
±14	47%	33%	<i>I am fairly compensated.</i>
±14	66%	52%	<i>They provide training and other ways to develop my career.</i>
±10	68%	58%	<i>Management expectations are clear.</i>
±7	67%	60%	<i>I feel that what I do here makes a difference.</i>
±7	75%	68%	<i>I have all the resources and equipment that I need to do this job.</i>
±6	40%	34%	<i>I feel that I receive fair company benefits.</i>
±6	67%	61%	<i>Managers know where the organization is headed and how to achieve the goals</i>
±6	60%	54%	<i>Managers assign tasks and coordinate effectively.</i>
±6	58%	52%	<i>Managers inform the staff concerning important issues and changes.</i>
±5	71%	66%	<i>The facilities provide a nice work environment.</i>

<b>ELCHE-VINALOPÓ</b>			
<b>Top 10 positive comments regarding the best companies in the same sector 2013</b>			
<i>Difference</i>	<i>2013</i>	<i>Health care sector</i>	<i>Area</i>
±19	71%	52%	<i>They provide training and other ways to develop my career.</i>
±15	52%	37%	<i>Promotions are fair.</i>
±12	72%	60%	<i>I feel that what I do here makes a difference.</i>
±12	78%	66%	<i>The facilities provide a nice work environment.</i>
±12	73%	61%	<i>Managers know where the organization is headed and how to achieve the goals.</i>
±11	52%	41%	<i>Everybody has the opportunity to be recognized.</i>
±11	65%	54%	<i>Managers assign tasks and coordinate effectively.</i>
±11	63%	52%	<i>Managers inform the staff concerning important issues and changes.</i>
±10	57%	47%	<i>Managers are neutral and they avoid favoritism.</i>
±10	59%	49%	<i>Managers encourage, consider and answer our ideas and suggestions.</i>

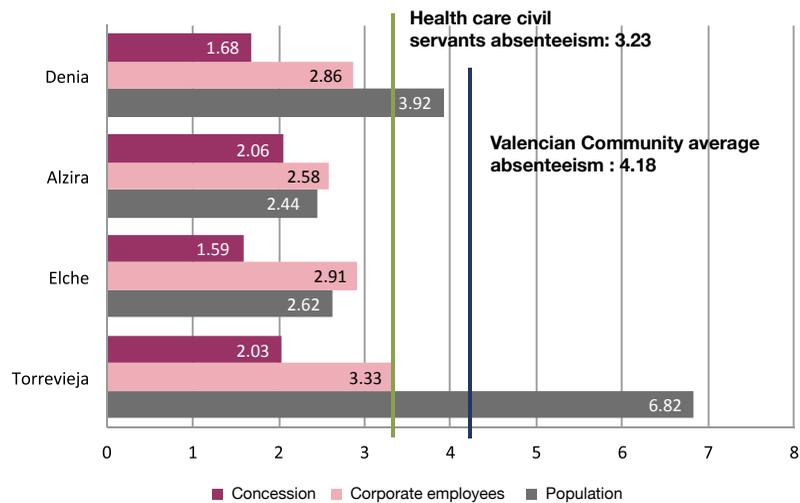
As can be seen below, there has been less absenteeism among Ribera Salud's staff than the general average in the Valencian Community and also compared with civil servants in the health sector.

### RATES OF ABSENTEEISM 2013 (%)



Rates of absenteeism extracted from the 3rd Adecco Report on Absenteeism Spain

### RATES OF ABSENTEEISM 2014 (%)



Source: personnel labor data: the mutual insurance company for industrial accidents (UMIVALE) for all the concessions mentioned; Public sector and general population data: Conselleria de Sanitat (Datawarehouse I.T. monthly)

The benchmarking of human resources from the **IE Business School (IEB)** in which the hospitals of Elche and Torrevieja participate offers positive comparative data for both locations.

	Vinalopó y Torrevieja	IEB
Abandonment	27%	43%
Training coverage	100%	72%
Training expenses per employee	342€	182€
Employees guided by objectives	86%	13%
Index of extension	100%	72%

*Ribera Salud has developed a Pay for Performance model that allows alignment of the objectives of the organization and its healthcare professionals through the assessments for quality and assistance*





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## ANNEXES

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## **ANNEX I: STUDIES ABOUT RIBERA SALUD**

Since its launch in 1999 with the Hospital La Ribera, the PPP health model has been studied with interest from the international panorama. All of the hospitals of the Alzira Model have received and continue to receive visits from various organisations and institutions from all over the world that have studied its model, such as the National Health Service NHS, the Universities of Berkeley, California, Florida, Virginia and Pisa and Business Schools such as Harvard Business School that is preparing a case study about the model for its students.

Report from the NHS European Office. The search for low-cost integrated healthcare

<http://www.riberasalud.com/ftp/bibli/140320131025122011%20NHS%20bibliografia.pdf>

Success case of the Imperial College Health Partners

<https://www.youtube.com/watch?v=iaBGYtK1d7w>

Visit from Harvard Business School

<http://www.levante-emv.com/comunitat-valenciana/2013/07/18/delegacion-harvard-analiza-modelo-alzira/1017685.html>

Visit from the University of Berkeley

<http://www.consalud.es/seenews.php?id=11501>

First conclusions from the Report by the University of Berkeley

<http://www.eleconomista.es/valenciana/noticias/6816857/06/15/Scheffler-destaca-que-el-modelo-Alzira-permite-al-gobierno-un-ahorro-del-20-en-sanidad.html#.Kku8NlyXeKThtX9>  
Success case of IBM for the BI Cognos project

<https://www.youtube.com/watch?v=8qfz61bU8vw>

Ribera Salud has been invited to participate in recent years in the main international forums where over 100 conferences have been presented and its experience in the management of the Alzira model has been presented in the World Bank, Inter-American Development Bank, Asian Development Bank and in the Economic Forum of the Americas.

<http://www.infosalus.com/actualidad/noticia-empresas-ribera-salud-unica-empresa-espanola-conferencia-anual-foro-economico-americas-20120628165819.html>

Particularly notable is the world summit WISH in Doha (Qatar) in 2013

<http://www.infosalus.com/asistencia/noticia-modelo-alzira-presenta-ejemplo-experiencia-exito-cumbre-innovacion-sa-nitaria-qatar-20131210191741.html> where Alzira was presented as one of the 7 global cases of success because, according to this report <http://www.wish-qatar.org/app/media/384>

*"it has shown in a convincing manner the feasibility of public private health organisations with better care at a lower cost." The report was directed by the Director of Innovation Initiatives in Health Assistance and Value in the Brookings Institute (USA) and indicates "in terms of results, quality and costs, the Alzira model has certainly achieved impressive results".*

Recently, Brookings Institute selected the experience of the Chronic Patients Plan of the group for the study "Spain: Reinventing chronic care management for the elderly" edited by the Center for Health Policy at Brookings that was presented in April 2015 in Washington

<http://www.brookings.edu/events/2015/04/07-innovations-in-global-diabetes-care>

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### ANNEX III: SOURCES

The institutions and publications mentioned below have been used as sources in the report and are quoted in the text with a number that refers to the following list:

• Data originating from sources of Conselleria de Sanitat Generalitat Valenciana:

a) Data extracted from Alumbra

b) Data extracted from GAIA - Management of pharmaceutical provisions RVN: Nominal Vaccination Register.

c) Website of the General Sub Directorate of Epidemiology and Health Monitoring

[http://administracion.gob.es/pag\\_Home/espanaAdmon/Transparencia\\_DatosAbiertos/datos\\_abiertos.html#.VbDbffntHw](http://administracion.gob.es/pag_Home/espanaAdmon/Transparencia_DatosAbiertos/datos_abiertos.html#.VbDbffntHw)

d) Satisfaction Survey

e) Data provided by the General Directorate of Economic Resources  
Data provided by the General Directorate of Health Care

f) Data provided by the General Directorate of Pharmacy and Health Products

• Ministry of Health, Social Services and Equality. ([www.mssi.gob.es](http://www.mssi.gob.es)):

a) Basic Minimum Set of Data - Hospitalisation (CMDB-H)

b) Primary Care Information System (SIAP)

c) Population database

• Atlas of Variations in Medical Practice.

(<http://www.atlasvpm.org>)

- Hospitalisation database of IASIST.

Database for 2013 with 50 Spanish hospitals participating in the TOP 20, 30 of level III (public hospitals with over 12,000 discharges, that avail of an ICU and without specialities), and 20 of level IV (public hospitals with tracer conditions available such as cardiac, thoracic, neurosurgery or solid transplant surgery).

These hospitals accumulate a total of 887,646 hospitalisation discharges that represent 51.4% of the discharges from the SNS for this group of hospitals.

## ANNEX IV: EFFICIENCY CALCULATION

From the economic information provided by the General Administration of Healthcare (DGAS) we obtain the average cost per inhabitant in 2014 and we can compare the differences, if any, between direct management departments and administrative concessions.

### a) Cost per inhabitant (SIP Health Card) in departments with administrative concession

The healthcare cost for the Government of patients assigned to these Departments is the amount of the capita, which in 2014 was of € 680.17. This price includes all the health care received by patients assigned to the concession department (capita population) in both fields, primary and specialized care. There are however, some concepts which costs are assumed by the Administration.

- 1) Endo-Prosthesis
- 2) Exo-Prosthesis
- 3) Pharmacy Prescriptions
- 4) Non-Emergency Medical Transport (TSNU)
- 5) Ambulatory Oxygen (OA)

**Note 1:** It is included in the capita €680.17 the cost of ALL the health care of these patients (except the 5 concepts detailed above) whether such assistance is provided in the centers directly managed by the concessionaire or other centers, including the public ones.

*That is, if a capita patient from a concession is hospitalized in a public hospital under direct management, this assistance would be an additional cost to € 680.17 for the Administration, as the concessionaire would have to compensate the Administration for such assistance (COMPAS) in line with the Public Fees and Prices Law.*

Therefore, to understand the amount each concession capita patient costs to the Administration, we must add the sum of the 5 concepts explained above to the capita amount. However, since we only can find the 3 first concepts of the list in the information provided by the General Administration of Healthcare (DGAS), we add them to the price of the capita in order to calculate the total cost of healthcare per patient to the Administration (With the exception of Non-Emergency Medical Transport (TSNU) and Ambulatory Oxygen (OA), which does not mean we cannot compare the cost between departments under concession and direct management departments. In fact, we are not able to consider the costs of TSNU

and OA because there is not information available about these concepts.

To compare these data empirically, we would have to deduct the costs of depreciation and financial expenses from the amount of capita of departments with management under concession (because such financial expenses are used almost entirely in financing of investments that are amortized). It is important to focus in this aspect because in direct management department's patient assistance, it is not considered the section concerning investments, but only current expenditure.

### b) Cost per inhabitant (SIP Health Card) in direct management departments.

We estimate this cost from the information provided by the General Administration of Healthcare (DGAS) considering:

- a) Total expenditure: includes expenditure items of chapter I, concerts, prostheses, pharmacy, medical supplies and other current expenditure of the departments of the AVS, consortia, medium and long hospital stay and emergency services.
- b) Primary care current cost: the information supplied is from 2012, 2013 and 2014.
- c) Endo-Prosthesis, Exo-Prosthesis and Pharmacy Prescriptions.

We add these concepts and divide the amount between the SIP (Health Card) population of direct management departments, in order to obtain a cost per inhabitant, to compare the result with the concession departments.

**Note 2:** The SIP population information detailed on the control panel (Total SIP, capita and non-capita) does not match with the capita population data used to make the payment to the concessions (the last one is lower). In the pursuit of, as mentioned above, a 100% comparable information, we use the same basis for both groups (direct management and concession management), taking as the unit of measurement the SIP total population (not the considered capita for payments to concessionaires).

## ANNEX V: TABLES

### Dropout rates

Patients who are part of the protected population in the period in which they are treated by other Departments / Department Protected Population within a period n.

	Departament	2011	2012	% deserción 2011	% dropout 2012	Average 2011-2012
1	Vinaroz	3.435	3.558	3,91%	4,21%	4,06%
2	Castellón	8.088	8.063	2,96%	3,04%	3,00%
3	La Plana	13.222	12.898	7,15%	7,11%	7,13%
4	Sagunto	11.806	11.812	8,05%	8,17%	8,11%
5	Valencia Clínico	52.502	49.707	15,92%	15,40%	15,66%
6	Valencia Arnau	53.513	53.748	18,23%	18,45%	18,34%
7	Valencia La Fe	18.627	16.929	9,90%	9,24%	9,57%
8	Requena	4.565	4.403	9,34%	9,16%	9,25%
9	Valencia General	41.691	40.345	11,99%	11,85%	11,92%
10	Valencia Peset	59.051	60.290	16,82%	17,53%	17,17%
11	La Ribera (Alzira)	13.905	13.365	5,44%	5,31%	5,38%
12	Gandía	12.469	12.093	7,03%	7,02%	7,03%
13	Denia	6.015	5.381	3,77%	3,52%	3,65%
14	Xàtiva Ontinyent	12.887	12.707	6,52%	6,55%	6,54%
15	Alcoy	7.324	6.880	5,35%	5,11%	5,23%
16	Villajoyosa	5.591	5.250	3,27%	3,21%	3,24%
17	San Juan	23.289	21.215	11,31%	10,58%	10,94%
18	Elda	7.963	7.606	4,19%	4,07%	4,13%
19	Alicante	10.600	9.947	4,14%	3,96%	4,05%
20	Elche	9.922	8.897	6,38%	5,83%	6,10%
21	Orihuela	8.066	7.953	5,00%	5,03%	5,01%
22	Torrevieja	4.479	4.440	2,58%	2,73%	2,65%
23	Manises	30.169	25.367	15,46%	13,12%	14,29%
24	Elx-Crevillent (Vinalopó)	11.821	9.097	7,87%	6,14%	7,00%
	<b>Average VC</b>			<b>8,91%</b>	<b>8,71%</b>	<b>8,81%</b>

Source: Agencia Valenciana de Salud

**Antonio Clemente's Thesis. Selection of main tables.**

Next table, posted on Antonio Clemente's Thesis, shows the results of Managing Agreements in 2010 being H a hospital managed directly by the Administration and being C a concession.

Hospital	Puntuation	Relative position
H4	89,85	1
C2	87,58	2
H10	84,48	3
C3	84,18	4
H6	83,38	5
C5	82,48	6
C1	81,73	7
H15	81,7	8
H14	78,27	9
H17	77,31	10
H7	76,83	11
H16	76,37	12
H8	75,38	13
H20	74,12	14
C4	73,61	15
H11	72,93	16
H19	71,63	17
H2	66,59	18
H12	64,75	19
H1	64,45	20
H13	57,51	21
H22	55,44	22
H5	55,3	23
H18	43,38	24
H21	33,06	25

It is also remarkable in the same thesis the following chart, which highlights the efficiency of the concessions, being outstanding the less waiting list in first consultations and the high index of outpatient surgical substitution.

	Management	Media	Standard deviation
First consultations	Public	48.824,95	21.571,67
	Concession	73.050,80	20.689,60
Waiting list in first consultations (days)	Public	52,67	33,48
	Concession	14,52	20,06
Outpatient surgical substitution index	Public	60,09%	0,149
	Concession	80,67%	0,889348

Test Mann-Withney result:

	Tipo de Gestión		Statistics
Health material cost in emergencies	Public	Median	248.565,34
	Concession	Median	725.782,24
RM equipment	Public	Median	0,00
	Concession	Median	1,00
Management agreement results	Public	Median	73,52
	Concession	Median	84,18
Hip fracture operated with 2 or more days of delay index	Public	Mediana	0,588
	Concession	Median	0,169

## ANNEX VI: QUALITY RECOGNITIONS

<p><b>Health Department of Alzira</b></p>	<p>AENOR certification according to UNE standard ISO 9001:2008: Admissions Unit and Patient Management; Hospitalisation Process; Radiophysics Service and Radiology Protection; Area of External Consultations; Surgical Block, Emergency Services and Emergency Sueca's CSI and Cullera's CSI; Process of Care for Pregnant Women in the Hospital and Health Centres of Alginet and Alberic, Hemodynamics Service, Intensive Care Unit, Carlet's Integrated Health Center, Biological Diagnostic area .</p> <ul style="list-style-type: none"> <li>- AENOR certification ISO 14001 in relation to the environment. (Hospital)</li> <li>- AENOR certificate for Energy Management according to the ISO 50001 standard. (Hospital)</li> <li>- OHSAS 18001 certificate from AENOR for management of occupational risks. (Health's Department)</li> </ul>
<p><b>Health Department of Torrevieja</b></p>	<ul style="list-style-type: none"> <li>• AENOR certification according to UNE standard ISO 9001:2008: Hospital Emergency Service; Area of Care for Pregnant Women; Health Centre of Acequión.</li> </ul>
<p><b>Health Department of Denia</b></p>	<ul style="list-style-type: none"> <li>• AENOR certification according to UNE standard ISO 9001:2008: Biological Diagnosis; Image Diagnosis; Emergencies; Pharmacy; Area for Assistance Activity Programming; Surgical Block; Obstetrician Process; Health Centre of Gata; Nephrology Clinical Area; MIR Teaching; Library Process.</li> </ul>
<p><b>Health Department of Vinalopó</b></p>	<ul style="list-style-type: none"> <li>• AENOR certification according to UNE standard ISO 9001:2008: Hospital Emergency Service; Area of Care for Pregnant Women; Health Centre of Dr. Sapena.</li> <li>• Certification of People according to the standard UNE-EN ISO/IEC 17024, that guarantees capacity or competence of a person to efficiently perform their professional work.</li> <li>• Hospital and six health centres of the Department, certified in the first phase of the process to achieve the IHAN rating (Initiative for the Humanization of Assistance at birth and Breastfeeding).</li> </ul>
<p><b>Central Clinical Laboratory BR Salud in the Community of Madrid</b></p>	<ul style="list-style-type: none"> <li>• ENAC certification that accredits the technical competence in conformance with the criteria stated in the standard UNE ISO 15189:2013.</li> <li>• Certification of BUREAU VERITAS for the Quality Management System according to the UNE Standard ISO 9001.</li> </ul>

## ANNEX VII: CORPORATE SOCIAL RESPONSIBILITY

Companies with Corporate Social Responsibility must incorporate it as an integral part of the strategic planning, the identity and the culture, and keep it present in all daily decisions. Ribera Salud declares its commitment to professionals, to society and to the environment. It develops actions for disadvantaged groups, promotes cooperation initiatives for development and promotes sustainable projects from an environmental perspective.

Ribera Salud has made a significant effort since its foundation to carry out active CSR policies, assigning resources to this area, as an organisation that provides a basic service for society. The Corporate Social Responsibility forms part of its identity, with initiatives directed towards professionals or led by the professionals themselves, with social programs in the most direct community environment of the health departments it manages in order to guarantee access to the health system for all with equal conditions, with development cooperation projects, conscious that a global health policy is not possible without providing the minimum health conditions necessary for the population, with responsible actions in relation to the environment.

### PROFESSIONALS

Lines of action	Awards
<p>Training programs funded by the organisation for all professional areas.</p> <p>Promotion of teaching and research.</p> <p>Payment model based on incentives.</p> <p>Establishment of the professional career at all levels.</p> <p>Initiatives for balance of the family/professional life beyond the legal requirements.</p> <p>Policies for equal access and guarantee for daily performance in equal conditions.</p> <p>Promotion of gender equality plans and creation of guides for fighting abuse,</p>	<ul style="list-style-type: none"> <li>• Adhesion to the Charter for Diversity, European initiative of voluntary commitment to support the inclusion of diversity and non-discrimination.</li> <li>• Member of VIT Salud Valencia, Cooperation network for the Promotion and Transfer of Technology and Knowledge.</li> <li>• Alzira, first public hospital with the OHSAS 18001 certificate from AENOR for management of occupational risks.</li> <li>• Certification of People according to the standard UNE-EN ISO/IEC 17024, for Vinalopó, that guarantees capacity or competence of a person to efficiently perform their professional work.</li> <li>• Seal of “Fent Empresa. Iguals en Oportunitats” from the Department of Social Well-being granted to Vinalopó and Denia.</li> <li>• Red Cross Equality Table Alicante prize for Torrevieja and Vinalopó for their equality policy.</li> <li>• Award in the 10th Edition of the “Entrepreneurs and Employment” Prizes for innovation in HR for the pioneer project in Trust Management for the humanisation of Health Assistance.</li> </ul>

## COMMUNITY

Lines of action	Awards
<p>Agreements with town halls to train people from vulnerable backgrounds as health agents, in order to favour their involvement in the programs and improve accessibility (RIU project in La Ribera or ICI Carrus in Vinalopó).</p> <p>Agreements with school centres for health education and training, promoting a healthy lifestyle and giving basic knowledge to parents and teachers.</p> <p>Agreements with patient associations for the performance of conferences by professionals, granting of spaces in the centres for the performance of activities, etc.</p> <p>Actions for groups with special needs, for example a sign language interpreter to accompany deaf patients.</p>	<ul style="list-style-type: none"> <li>• “Del Metge al Mestre” guide, with basic steps of action to help teachers to face certain common illnesses among school children.</li> <li>• Prize from the National Patients Association AER-AC-MEIM for its contribution to the model for public and private collaboration and awareness with the Patients Association.</li> <li>• PROSUB, Disability Association of La Ribera, for its collaboration in Early Care for children with disabilities.</li> <li>• Apesorial, Association of the Deaf in Alzira, for favouring work insertion of deaf people and for availing of interpreters to accompany the deaf people.</li> <li>• Aspadis, social work dedicated to the assistance and rehabilitation of significantly mentally disabled children and young people, for its collaboration in covering the special needs in health care.</li> </ul>

## ENVIRONMENT

Lines of action	Awards
<p>Bioclimatic architecture</p> <p>Strengthening of natural light with sensors, centralised management systems to adapt consumption to demand, using freecooling systems to manage the air conditioning and promoting the use of renewable energies.</p> <p>Energy efficiency plans that promote savings in consumption and reduction in the emission of greenhouse gases. 7% reduction in the energy consumption in a year (equivalent to 296 tonnes of carbon dioxide).</p> <p>Actions directed towards professionals for awareness about good use of resources (for example, the section “the green corner” in the internal bulletin that offers information and advice about reduced consumption of water, paper, energy...).</p>	<ul style="list-style-type: none"> <li>• Alzira, first public hospital in Spain with an AENOR certificate in Energy Management, according to the standard UNE-EN 1600.</li> <li>• Alzira: Certificate ISO 50001 and Certificate ISO 14001 in relation to the environment.</li> </ul>

## DEVELOPMENT COOPERATION

Lines of action	Awards
<p>Hospital commission for Development Cooperation to facilitate the creation of internal dynamics favourable to national and international solidarity.</p> <p>Training of professionals for development cooperation actions.</p> <p>Promotion of participation of professionals in development cooperation actions (work permission, leave, etc.).</p> <p>Agreements with various NGOs for the exchange of knowledge, training and advice, and donation of medicines and material.</p> <p>Collaboration with various Organisations in campaigns for awareness and fund catchment as well as for energy situations.</p>	<ul style="list-style-type: none"><li>• Ambassador company for the Foundation for Justice, an organisation that works on different projects with school children in disadvantaged neighbourhoods.</li><li>• Twinning with the Bathalapalli Hospital in India of the Vicente Ferrer Foundation. Work group that has promoted analysis and training for the prevention and treatment of pathologies frequently associated with life conditions that are related to poverty, improving the management of waste and pharmaceutical management.</li><li>• Agreement with the NED Foundation (Foundation for Neurosurgery, Education and Development). Training and volunteering for improved surgical medical attention for patients in African countries.</li><li>• Collaboration with Vita et Pax Rwanda for humanitarian projects directed towards citizens and professionals.</li></ul>



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