National Health System of Spain Annual Report 2009

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National Health System of Spain Annual Report 2009

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MINISTERIO DE SANIDAD, POLÍTICA SOCIAL E IGUALDAD

Plan de Calidad para el Sistema Nacional de Salud

Spanish Law 16/2003, of 28 May 2003, on Cohesion and Quality in the SNS

CHAPTER VI. On Quality

SECTION 2.a. On the Spanish Healthcare System Observatory

Article 63. Spanish Healthcare System Observatory

The Spanish Healthcare System Observatory will be created, as an independent body within the Ministry of Health, Social Policy and Equality, to perform ongoing analysis of the SNS as a whole, through comparative studies on the health services of the autonomous communities in the areas of organisation, service provision, health care management and outcomes […]. […] The Observatory will prepare an annual report on the state of the SNS, which will be presented by the Ministry of Health, Social Policy and Equality to the Interterritorial Council of the SNS.

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Summary

Health status of the population

As of 1 January 2009 the population of Spain was 46,745,807, according to data extracted from the municipal registers of inhabitants. Of them 49.5% were men and 50.5% were women. Between 2001 and 2009 the population aged 65 and over increased by 10.6%, although the percentage of growth in the younger population was even greater and thus the weight of the older population in society as a whole diminished, although Spain's demographic structure is still one of an aged population. Natural growth – births minus deaths – has reversed its previous downward trend and moved from 1.1 per 1000 inhabitants in 2001 to 2.9 in 2008.

In Spain life expectancy at birth is 81.1 years, slightly higher than the EU average, which is 79.1. Life expectancy at birth in the EU as a whole has risen 3.9 years since the beginning of the 1990s, while in Spain the figure has risen 4.2 years. By sex, life expectancy at birth continues to be higher for women, with a difference of just over seven years.

Infant mortality in Spain has continued to fall: in 2008 the rate was 3.3 deaths of infants under one year of age per 1000 live births; in 2001 it was 4.1. Perinatal mortality, an indicator of the quality of maternal and infant care, has fallen steadily throughout the past decade: in 2001 the rate was 5.6 perinatal deaths per 1000 live births but it dropped to 4.4 in 2008. Infant and perinatal mortality rates in Spain (3.5 and 4.5 respectively per 1000 live births around 2007) were lower than those of the EU-15[1] group of countries (which were 4.0 and 5.9 respectively). Between 1990 and 2007 the drop in infant mortality in Spain was 65%, compared to the drop of 48% in the countries of the UE-15. During the same period perinatal mortality fell 24% in the EU-15 countries and 40% in Spain.

The number of deaths in Spain was 386,324 in 2008, meaning that the crude death rate was 847.3 deaths per 100,000 inhabitants. The epidemiological profile in terms of causes of death is similar to that of nearby countries: approximately 80% of the deaths were due to five large groups of causes of death: diseases of the circulatory system (34.5%), cancer (26.2%), diseases of the respiratory system (10.04%), diseases of the digestive system (5.1%), and external causes such as injuries and poisoning (4.4%). Worth noting is the reduction in the number of traffic accident victims (a 23% reduction between 2001 and 2008 in the number of victims per 100,000 inhabitants) and of workplace accidents (the frequency index fell from 42.8 to 30.8 between 2001 and 2008). Most workplace accidents took place in the sectors of construction and industry. In contrast to the case of traffic and workplace accidents, the rate of death from domestic accidents and leisure accidents has fallen very little; it is estimated that in 2007 1.7 million Spaniards were involved in an accident of this type, which means almost 4 out of every 100 individuals. The most frequent accidents are falls (44.1%) followed by crushing, cuts and wounds (22.6%) and blows and collisions (13.0%).

In Spain 71.3% of men and 64.8% of women deem their health to be good or very good, compared to 67.8% and 61.7% respectively in the EU countries as a whole. In all

[1] EU-15: The 15 states forming the European Union since before 2004.

countries the percentage of men who consider their health to be good or very good is greater than in women.

Over the past 20 years, the percentage of smokers has declined (it was 29.5% in 2006-2007 and 34.5% in 2001), while there has been a slight increase in alcohol consumption (56% in 2006-2007). Men smoke and drink more than women do. With regard to drug use, the use of psychoactive substances is decreasing, with the exception of cannabis and cocaine, which show a slight increase.

A high proportion of the adult population leads a sedentary lifestyle, especially young people and the elderly, and rates are higher among women, although a downward trend has been observed in the last few years. Finally, the population's obesity rates are rising. They are somewhat higher in men and tend to increase with age.

Institutional description and analysis

The year 2009 was characterised by the change in the organic structure and responsibilities of the Ministry of Health and Consumer Affairs, which became the Ministry of Health and Social Policy. The new ministry is responsible for health and consumer affairs and also for social policy, family matters and dependence.

The Interterritorial Council of the SNS (hereinafter, CISNS) held eight plenary sessions, of which four were devoted exclusively to the situation arising from the Influenza A pandemic. Another extraordinary session was held to address the subject of the need for specialists in the SNS during the period 2008-2025. In addition, 108 meetings of commissions and working groups took place. The CISNS adopted 41 resolutions and prepared reports in regard to seven royal decrees and three ministerial orders. It also made reports regarding the COPD and rare diseases strategies and the evaluation and review of the cancer and mental health strategies.

The pluriannual health plan, which is the competency of each autonomous community's ministry or department of health, proposes health objectives and services, which are then put in practice through strategic or steering plans. The lines of strategy adopted by the autonomous communities can be grouped into three blocks: citizens' and patients' rights; clinical and quality management; plans and programmes regarding care for certain diseases and processes. Management plans or contract-programmes, which are present under different names in all autonomous communities, define the annual objectives, the budget, evaluation procedures and incentives.

The commitments laid down in the contract-programmes, or management plans, are undertaken in most cases between the autonomous community's Regional Ministry of Health and the Regional Health Services. The main issues addressed are economic aspects, clinical management, accessibility, care continuity, quality and the introduction of information systems.

As regards financing, budget allocation based on expenditure in previous years still plays a very important role, although the tendency is to correct this situation by incorporating components of capitation, complexity (in the case of specialised care) and the characteristics of the benefit basket.

Evaluation is usually performed by central bodies that use information systems with predetermined indicators, although self-evaluation procedures are also used. The most frequently used indicators are expenditure and budget compliance, the rational use of pharmaceuticals and the extent of service package implementation and coverage. Other indicators reflect the referral of patients to specialised care and the control of waiting lists. Variable productivity is a constant in primary care, while it is more unevenly

distributed in specialised care. Evaluation results have repercussions on the professionals in several autonomous communities.

Public entities such as foundations and public enterprises, are also governed by contract-programmes with features similar to the ones described above. In them there is no real transfer of risk, because in the event of budgetary non-compliance, in the form of losses, the imbalances tend to be compensated by the autonomous community's Health Services. This is not true in the case of the private sector or administrative concessions.

The total expenditure of the Spanish health system in 2008 was 97.614 million Euros, which represents 9% of Spain's gross domestic product (GDP). Of this percentage, 6.5% was financed with public resources and 2.5% with private resources. In the 2004-2007 period health expenditure grew annually by an average of 9.1%. Public sector expenditure during this period increased by 9.9% while private sector expenditure increased by 7.2%. The share of public and private expenditure in the GDP has increased by 0.8 and 0.7 percentage points respectively.

Of the public expenditure, 55.2% corresponds to hospitals, 19.1% to pharmacy and 15.7% to primary care. Remuneration of the sector's workers accounts for 43.6% of the public expenditure, intermediate consumption accounts for 20.5% of the expenditure, followed by current transfers at 20.2% and contracts with the private sector at 11.1%.

The Health Cohesion Fund compensates autonomous communities for the care they give to patients from other autonomous regions and to foreign patients who are spending a short time in Spain and have health care coverage provided by their home country. The amounts paid for these items in 2009 were 67.9 and 28.0 million Euros respectively.

In 2009 the autonomous communities received 26.7 million Euros for the funding of health strategies, patient safety, interoperability and information systems.

Resources and care activity

SNS primary care is provided through a structure of 157 Health Areas and 2714 Basic Health Zones, which have 2954 health centres and 10,207 local health facilities. Between 2007 and 2009, the number of employees working at the care-giving level of SNS primary care rose in all professional categories. This represents an increase of 3.19% all together, the growth being somewhat larger in the case of nursing staff (4.98%) than in that of family medicine (3.69%). The average number of people assigned per professional is 1,408 for each family doctor, 1064 for each paediatrician, 1624 for each nursing professional and 2937 for each administrative assistant. In 2009 the greatest frequentation was observed in family medicine (5.6 visits per inhabitant per year), followed by paediatrics (5.3) and nursing (2.9).

All autonomous communities have their own way of organising non-hospital urgent care, based on emergency coordinating centres in operation 24 hours a day, every day of the year. Also, the primary care network responds to urgent care needs during normal working hours. Outside of normal working hours, non-hospital urgent care is structured as follows: some Health Centres stay open 24 hours a day, with the Out-of-Hours Care Site (PAC) being the most frequent type; there are also dedicated facilities exclusively for urgent care, called the Urgent Primary Care Service (SUAP), Normal Urgent Care Services (SNU) or Special Urgent Care Services (SEU).

The vast majority of the specialised care resources in Spain are found within the SNS, which also performs most of the activity in the sector, especially in the areas of hospitalisation, obstetrics, consultations and urgent care. Recent years have shown a confirmation of the trend towards the ageing of the population attended, the reduced use

of hospital beds and displacement of activity towards ambulatory settings. These changes respond to demographic factors, technological advances and the habits and expectations of the population. Of all the associated factors, the only one that shows an alteration with respect to the trend observed over the previous two decades is that of natality, which, following a pronounced decrease, is again on the rise, as reflected in the growing number of births attended since 2000.

In 2009, of all the hospitals in operation (804) slightly over 40% belonged to the SNS and in 2008 of all the private hospital discharges over 37% were financed by the SNS. Of the total number of beds (160,981), 71.8% are in the public network, and for the entire sector the number of beds per 1000 inhabitants is 3.53. The progressive shift towards ambulatory specialised care has led to a significant increase in the number of day hospital places, which in the public sector has grown from 4375 beds in the year 2000 to 8475 in 2008; a similar phenomenon has occurred in the private sector, where the figure has risen from 1200 to 2518 beds during the same period.

Frequentation in 2008 was 90 admissions for every 1000 inhabitants. A total of 26.2 million urgent care needs were attended by hospitals, 80% of them at public hospitals. Almost one third of the 4.5 million operations were performed in private hospitals, although more than 30% of the major outpatient surgery performed in private hospitals was paid for with public funding. In 2008, three out of four operations involving the 15 most frequent surgical procedures were performed in an ambulatory setting.

Among the causes of hospitalisation, first place is problems related to pregnancy, childbirth and puerperium, followed by circulatory system diseases, digestive system diseases, respiratory system diseases and neoplasia.

The SNS designates Reference Centres, Services and Units (CSUR) as a means to guarantee equitable access and high-quality, safe and efficient care for patients with infrequent pathologies or who need highly-specialised care or care involving advanced technology. Royal Decree 1302/2006 lays down the procedures for the designation and accreditation of the CSUR-SNS. In 2009 a total of 68 facilities received CSUR designation by the Interterritorial Council and began operating as such. They are distributed throughout ten autonomous communities. Over the course of the year the designation committee of the Interterritorial Council evaluated 88 new applications for CSUR status.

Spain's National Transplant Organisation (ONT), created in 1989, is an autonomous body of a technical nature attached to the Ministry of Health, Social Policy and Equality. Its main objective is to promote donation, for the sole purpose of giving Spanish citizens in need of a transplant the very best chances of obtaining it. Its mission is to co-ordinate and facilitate the activities of donation, extraction, preservation, distribution, exchange and transplant of organs, tissue and cells within the Spanish health system, in accordance with the principles of co-operation, efficiency and solidarity. Since the creation of ONT, Spain has moved from the average-to-low segment of European donation rates, with 14 donors per million population (PMP), to the levels of 33-35 donors PMP that have been constant in recent years.

The term *"the Spanish Model"* is used worldwide to refer to the set of measures put in place in Spain to improve organ donation by deceased donors; it comprises a basic framework that is suitable from the legal, ethical, economic, medical and political perspectives. The basic aspects defined by this model are:

— a network of co-ordinators
— a programme to improve the quality of the organ donation process

— ONT central office, which acts as a service agency in support of the entire system
— special emphasis on ongoing training
— reimbursement of hospitals for the activities of obtaining and transplanting organs
— working with the media to increase the population's level of knowledge about donation and transplants
— appropriate legislation

Since ONT's creation, 73,855 organ transplants have been performed in Spain, 4028 of them in 2009. That year in Spain the number of organ donors was 1606, which represents a rate of 34.4 donors PMP. In addition, in the 20 years that the ONT has been in existence, over 300,000 cell or tissue implants have been performed in Spain, thanks to which over 12,000 people benefit every year from the application of some type of tissue of human origin.

Public Health

In 2009 various projects related to health promotion were undertaken in conjunction with the Ministry of Education and Science, and numerous activities were co-ordinated jointly with the Spanish Network of Healthy Cities and the Spanish Network of Healthy Universities. SNS activity on the international level has centred on the permanent forums of the WHO and the EU on the subjects of violence prevention, inequality, healthy prisons and social determinants. Two documents on health education were published; one is about the quality criteria of health promotion programmes in schools and the other is a guide to improving health programmes at schools.

In 2009 the SNS continued its efforts in the EU and WHO strategies to reduce alcohol-related harm and in the modification of Law 28/2005 on health care actions to curb smoking. All autonomous communities have taken steps towards the implementation of plans to prevent the use of tobacco, alcohol and other drugs. There has also been a collaborative effort with the National Traffic Authority (DGT) to develop a new Strategic Plan on Road Safety, which will be finished in 2015.

Also this year, following the WHO's declaration of the public health emergency resulting from the influenza A (H1N1) pandemic, and in co-ordination with the autonomous communities, protocols were developed to guide action in relation to influenza A. Also, the National Plan for Influenza Preparation and Response was activated throughout the country. A co-ordination plan for the transfusion system was published in relation to the influenza A (H1N1) pandemic, along with recommendations regarding the Creutzfeldt-Jakob disease variant and Chagas disease. The vaccination programme and register in place throughout the country has made it possible to achieve primary vaccination coverage greater than 95% for the basic series and hepatitis B, and greater than 97% in the case of meningococcal group C immunisation.

The data from the last period analysed, 2008, indicate that the rate of new AIDS diagnoses in Spain is at a level similar to that of other countries in Western Europe and that HIV is currently being transmitted mostly by unprotected sexual contact. It has also been observed that more than a third of the new diagnoses are among the immigrant population, which makes it necessary to diversify prevention programmes and adapt them to the needs of this group, which is socially and culturally heterogeneous and

especially vulnerable. In 2008, all autonomous communities carried out prevention activities with their own funds and also with funds transferred from the MSPSI, for a total amount of 32,437,480 Euros. In addition, NGOs working in this field carried out a high number of actions, largely funded by the MSPSI.

The REACH regulation concerning the registration, evaluation, authorisation and restriction of chemical substances, in the area of human health, went into effect in 2009. A total of 90,161 chemical substances were pre-registered, having been presented by 2289 companies.

The SNS took part in the UNICEF research project on the indicators of child well-being in Spain and also, as part of the National Strategic Plan on Children and Adolescents, in working groups on child abuse and on social inclusion and peaceful co-existence.

In 2009 the Quality Plan for Border Health Control was further consolidated. There has been an exponential increase in import and export authorisations for biological samples to be used for research purposes (RD 65/2006). The Health Alert System of the Border Health Control department reported 274 health incidents to the International Vaccination Centres (IVCs). The Health Product Surveillance System and the Rapid Alert System for Food and Feed (RASSF) registered an increase of over 300 incident notifications with respect to the previous year.

In 2009 the Co-ordinated System for Rapid Information Exchange (SCIRI) processed a total of 3130 cases related to food products, of which 186 were alerts, 1484 were informative and 1413 were product rejections.

In addition, the third NAOS (Strategy for Nutrition, Physical Activity and the Prevention of Obesity) Convention was held this year and the NAOS Strategy Awards made its third call for submissions. This year the preparation began of preliminary reports for use in the plan to reduce salt intake, to study the nutritional quality of food served by schools and to design indicators regarding diet and physical activity. An agreement on protecting children from excessive advertising was signed with the Federation of Radio and Television Networks of the Autonomous Communities (FORTA) and the Union of Associated Commercial Television Networks (UTECA).

The data gathered at schools participating in PERSEO, the school-based Programme for Health and Exercise against Obesity (which were chosen for their high obesity rates) indicated that obesity affects 19.8% of the boys and 15% of the girls there. Also, the data regarding sedentarism revealed that 13% of the children never play sports, and almost 10% of them play sports for only one hour per week. Educational initiatives have been put in place in the academic year 2008/2009, in order to inform children and families of the importance of getting enough exercise and eating right.

Pharmaceuticals and health products

In 2009 the Spanish Agency of Medicines and Health Products (hereinafter AEMPS, for its acronym in Spanish) carried out the following interventions in relation to pharmaceuticals for human use: a total of 1165 new pharmaceuticals were evaluated and authorised, 15,557 variations of already-authorised pharmaceuticals were evaluated, 738 pharmaceuticals were temporarily suspended or had their authorisation withdrawn, 15,099 suspicions of adverse reactions were notified.

With regard to AEMPS activity in the area of health products, in 2009, 138 authorisations were granted to new companies and 364 certificates of European approval

of health products were issued. In terms of market monitoring, 109 cases of non-conformity were detected, out of a total of 283 interventions.

Spain is one of the OECD countries in which pharmaceutical expenditure (not including that of hospitals) represents a large proportion of the health expenditure, with a figure of 20.5% in 2008. Other countries with high figures, similar to that of Spain, include: Portugal (21.8% in 2006), Greece (24.8% in 2007), Poland (22.6% in 2008) and Japan (20.1% in 2007).

In contrast, in Norway pharmaceutical expenditure was just 7.6% of the total health expenditure in 2008, making it the country where this item has the lowest specific weight in the health expenditure as a whole. A similar pattern is shown by countries such as Denmark (8.6% in 2007), United Kingdom (11.8% in 2007) and the United States (11.9% in 2008). In an intermediate position are countries such as Sweden (13.2% in 2008), France (16.4% in 2008) or Canada (17.1% in 2009).

While pharmaceutical expenditure through SNS-funded prescriptions still constitutes a large part of the total health expenditure, the figure has decreased in recent years. In 2008 it was 17.96% (this does not coincide with the figure cited in the paragraph above because the OECD data includes the costs of long-term units and the expense of prescriptions funded by civil servants' mutual funds). Pharmaceutical expenditure experienced rapid growth up through 2003, but since 2004 its growth has been more moderate, with the lowest increase being recorded in 2009, when the figure was 4.47%. One of the measures contributing to this containment of pharmaceutical expenditure is reference-based pricing, since this system promotes the use of generic medicines (which have a considerably lower price than brand-name medicines) and tends to keep pharmaceutical prices down. In 2009 consumption of generic packs was 24% of total pharmaceutical consumption.

Antiulcerants: proton pump inhibitors were the most widely used subgroup in 2009, with a DDD/1000/day of 106.07, due to the prevalence of disorders that respond positively to these medicines. It is worth noting that this group has experienced significant containment in its daily treatment cost, the 2005 figure of 0.58 Euros fell to 0.35 Euros in 2009. Hypolipidemic agents: HMG CoA reductase inhibitors, used to treat hypercholesterolaemia, also have a high DDI, 64.93. This is the sub-group on which the most money was spent in 2009.

In terms of consumption by active ingredient in 2009, Omeprazole is the most widely-used active ingredient, with a DDI of 84.42. Atorvastatin is the active ingredient on which the most money was spent and it represented almost 5% of the total retail value of all pharmaceuticals.

In 2009, 22% of the consumption in packs was marketed by just five pharmaceutical laboratories and in terms of cost, these five laboratories invoiced 28% of all the pharmaceutical sales through SNS medical prescriptions. The total number of dispensing pharmacies collaborating in the provision of pharmaceutical benefits was 21,153. Dispensing pharmacies had average monthly sales of 54,566 Euros from medical prescription invoices financed by the SNS.

In 2009 the number of pharmaceuticals incorporated into the public financing system, for inclusion in the SNS pharmaceutical benefits package, was 1618, of which 73% were generic medicines. As of 31 December 2009, the total number of pharmaceuticals included in SNS public financing was 19,820. Of these pharmaceuticals. 14,964 are on the positive list of products that can be invoiced to the SNS and are the ones that can be prescribed with SNS medical prescriptions.

Quality

In 2009 the SNS took stock of the activities undertaken in connection with the SNS Quality Plan 2006-2010, including the proposals for 2009 and 2010. For the Quality Plan 2009 a total of 43,915,130 Euros were allocated, earmarking 14,750,000 Euros for actions aimed at reducing health inequalities and 1,170,000 Euros for projects related to increasing healthy lifestyles, obesity prevention and the promotion of physical exercise, among others.

Especially worth noting among the actions of the Quality Plan 2009 are the first population-wide survey on sexual health in Spain, the *Health and Gender Report 2007-2008* on men and women in the health care professions and the *SNS Annual Report 2008*, a collaborative project with the autonomous communities and INGESA.

Numerous courses were held to train professionals in the matters of patient safety and risk management, and also in a prototype of an adverse event notification system, so that assessment of its suitability and functioning can take place in 2010. Also, the Citizen Network of Trainers in Patient Safety was created, to serve as a training and information tool. Nine million Euros were allocated to promote safe practices related to the hand hygiene programme and the bacteriemia zero programme, among others.

To promote clinical excellence a metasearcher was developed and the *"Guía-Salud"* project was consolidated. In addition, continued funding was allocated to ensure access in Spanish to the Cochrane Library and the Joanna Briggs Institute Library, and also for health technology assessment in research projects made possible by the Carlos III Health Institute. Support was also given to the Platform of Health Technology Assessment Agencies and Units.

Four documents on quality and safety standards and recommendations were prepared and 48 SNS Reference Centres, Services and Units (CSUR, for their acronym in Spanish) were accredited. In addition, 183 audits were performed on teaching centres and units, as part of the annual Auditing Plan 2009.

The SNS Diabetes and Mental Health Strategies were evaluated and the first steps towards evaluation of the Palliative Care Strategy were taken. A total of 10,715,750 Euros were allocated to fund actions by the autonomous communities in relation to the SNS strategies on ischaemic heart disease, cancer, mental health, palliative care, COPD, stroke and rare diseases. Also subsidies in the amount of four million Euros were granted to the autonomous communities to fund the implementation of the SNS Palliative Care Strategy. Preliminary work began on the SNS Sexual and Reproductive Health Strategy.

A new framework agreement was signed with the Ministry of Industry, Tourism and Trade and with the public enterprise Red.es, for the amount of 101.6 million Euros, which will be used to develop the on-line health project during the 2009-2012 period. The MSPSI contributed 46.6 million Euros and the project involves agreements between each autonomous community, the MSPSI and Red.es. In addition, interoperability projects in the autonomous communities were funded, in the amount of 13.9 million Euros, by the Cohesion Fund, with the funds it has earmarked for health strategies.

The SNS Key Indicators were selected and defined, with improvements to the information subsystems related to health status, the health care system and citizen satisfaction. In addition, the electronic information and on-line consultation tools have been reinforced, through e-bulletins for professionals containing news, patient safety items and information about impact.

To gather information about the best practices being used throughout Spain, each autonomous community was asked to report on a maximum of three best practices that it has implemented. The autonomous communities highlighted 23 best practices in the area of care-related projects, eight in the area of ICT, six in the area of prevention and health promotion, five in the area of quality, three in health care management and two in the management of social health care services. All of them are described in this SNS Annual Report.

In 2009, the Third Annual SNS Quality Awards were also presented. Awards went to 11 projects, selected from a total of 164 that had been submitted for consideration. Each of them received a monetary prize of 38,741.58 Euros. In addition, special recognition, but no monetary prize, was given to Dr. Alfonso Castro Beiras, in gratitude for his career dedicated to care quality improvement.

Equality initiatives

In 2009 the WHO final report on social inequalities in health ("*Closing the Gap in a Generation*" by the Commission on Social Determinants of Health) was presented in the event hall of the MSPSI. Also that year the first draft of a proposal for interventions to reduce social inequality in Spain was drawn up by the national commission of experts on this topic. In addition, work began on the project *"Innovation in public health, monitoring social determinants of health and reducing health inequalities."* The project report served as support for the conclusions drawn during the Spanish Presidency of the EU 2010 on this priority issue. All of the autonomous communities are taking action to reduce social inequalities in health, especially those affecting disabled persons, immigrants and the Roma community. At the municipal level, the Spanish Network of Healthy Cities now has 150 member cities, all of which have their own municipal health plan. Forty-nine Spanish cities have 53 specific projects on disadvantaged groups.

In the framework of the National Strategy on Equity in Health, which targets the Roma community, a study that compared the national health surveys conducted on the general population and those that specifically study the Roma ethnicity was presented. It concludes that health inequalities affect the Roma community and that the source of many of them are the group's social determinants.

The health area of the Strategic Plan on the Citizenry and Immigration published three reports: *"Report on infectious diseases imported by immigrants residing in Spain who travel for a short time to their countries of origin," "Report on Chagas disease in Latin Americans residing in Spain,"* and *"Report on basic strategies for addressing infectious diseases in immigrants, travellers and travelling immigrants."*

The aim of prison health services is to protect the health of those who are serving custodial sentences, to ensure that incarceration does not have a detrimental effect on their health. The prison health services must follow the same quality standards as the SNS uses for the general population, and to do so they have signed collaboration agreements with various health services. The prison population has the following specific characteristics: most inmates come from socially disadvantaged groups, with low levels of education and few job skills. In 2008 there were a total of 8187 admissions to penitentiary hospital beds, with an average stay of 79 days. The number of admissions to public hospitals was 4797, with an average stay of 7.0 days. As regards specialised care consultations in public health care facilities, 52,711 visits of this type took place. The most significant public health problem in prison health is caring for inmates with mental health disorders: up to 40% of the prison population suffers from some type of mental

health disorder, half of these cases are related to the use of psychoactive substances, and as many as 4% have a serious mental illness.

In 2009 the *Annual Report on Gender Violence* for the year 2008 was presented. The report reveals that rates of death caused by gender violence vary both by province and by autonomous community. In terms of age groups, the greatest risk is faced by women between 21 and 50 years of age. A total of 5766 health care workers attended training activities on this subject during 2009. Most of them were professionals in the primary care sector. Furthermore, all of the autonomous communities have implemented protocols for action in response to gender violence.

In 2009 the national survey on sexual health was carried out, in collaboration with Spain's sociological research centre (Centro de Investigaciones Sociológicas - CIS), with sampling points in 789 municipalities and 52 provinces.

The institutional and expert committees of the Strategy for Attending Normal Births created working groups to focus on the following issues: pregnancy, neonate and puerperium; indicators and registry systems; professional training; labour and delivery; and dissemination and implementation. In addition, the Clinical Practice Guide for Attending Normal Births and the Standards and Recommendations for Childbirth Care in Hospitals were published.

Clinical information management

The early results of the project known as Electronic Health Records in the SNS (EHR-SNS) include the effective incorporation of Comunidad Valenciana, Baleares and Rioja into the pilot stage already underway, and Spain's joining the International Health Terminology Standards Development Organization (IHTSDO).

In 2009 the main achievements of the project working groups were the following:

- The working group on standards and technical requirements prepared a consensus document on the area of standards policy and the technical proposal for the pilot testing.
- The advisory group on semantic interoperability issued a recommendation in favour of using SNOMED Clinical Terms®, and the Ministry assumed the role of national reference centre for SNOMED and the free distribution in Spain of the international version.
- The group of autonomous communities that will be participating in the pilot testing approved the method developed for evaluating both the use of the system by professionals and the perception of the system by its users.

The epSOS project, which is financed by the European Commission, focuses on achieving interoperability through the services of electronic prescription and patient summaries. In 2009 two autonomous communities, Comunidad Valenciana and Baleares, became part of the project, joining the ones already participating: Cataluña, Castilla-la Mancha and Andalucía.

The SNS Data Centre, or central node, is the hardware and software infrastructure that facilitates the exchange of information, both administrative and clinical, among the different agents of the SNS: MSPSI, autonomous communities, insurance mutuals and other stakeholders, such as the Social Security Treasury Office and the Ministry of Justice. The Data Centre is also connected to the institutions of the other states participating in epSOS. The MSPSI is responsible for maintaining network capacity,

availability and security. Communications take place through the Health Intranet, which has been in operation since 2003 and provides a private network capable of meeting the high levels of security, availability and service quality that are required. In 2009 an average of 350,000 messages were exchanged every day. The services performed are the following:

- Health card user database.
- Programmed referral of patients to reference hospitals.
- Living will registry.
- Registry of health professionals.
- Processing of invoices from dispensing pharmacies and pharmaceutical monitoring.
- Incorporation of new services related to electronic prescription EHR-SNS and the epSOS project is foreseen.

Professional regulation and training of health care personnel

In 2009 further attention was devoted to human resource planning in relation to specialist needs, as this is one of the biggest challenges in ensuring the continued availability of quality health care. The report on the supply and demand of medical specialists in Spain between 2008-2025 was published ("Oferta y Necesidad de especialistas médicos en España 2008-2025[2]"). In addition, the Ministry assumed responsibility for recognising professional qualifications obtained in other European Union member states.

As regards training, seven programmes that provide training in the specialties of the health sciences were updated (programas formativos de especialidades en Ciencias de la Salud[3]) and new programmes were approved for the specialties of Occupational Health Nursing and Geriatric Nursing.

The number of places in the 2009-2010 call for participation in the selective exams to access specialised training programmes indicates that the upward trend continues, especially in specialties with greater needs for professionals. Another novelty was the accreditation of Multiprofessional Teaching Units (Unidades Docentes Multiprofesionales – UDM) and the beginning of the application process. These centres will train specialists who, although they have completed different degree programmes, choose to pursue related care-giving fields.

Similarly, participation in the selective exams to access the specialised health care training places (corresponding to the 2008-2009 call for participation), confirmed the trend observed in recent years: stable growth in the number of candidates who registered for and took the exam in relation to the number of places available, in the degree of feminisation and in the number of candidates from non-EU countries.

The Commission of Ongoing Training in the Health Professions continued to works towards the application of the accreditation system, with 36,520 accredited training activities. Worthy of special note among such activities is the course on *Radiological protection for professionals who perform interventional radiological procedures*, which 469 professionals have successfully completed.

[2] Specialist training programmes. [http://www.msc.es/profesionales/formacion/guiaFormacion.htm]
[3] See footnote 2.

Research in the SNS

The Spanish System of Science and Technology has three planning instruments: the National Science and Technology Strategy; the National Plan for Research, Development and Innovation; and the Annual Work Plan. Within the 6th Annual Work Plan, the Strategic Action in Health (AES, for its Spanish acronym) is a comprehensive and horizontal group of actions aimed at generating knowledge with which to protect the health and well-being of the citizenry and to further develop the preventive, diagnostic, curative, rehabilitative and palliative aspects of ill health. At the same time it is designed to enhance competitiveness and RD&I capacity in the SNS and in companies associated with the sector.

One of the functions of the Carlos III Health Institute is to plan and manage the biomedical and health sciences research programmes included in the Strategic Action in Health. Its instrumental lines of action and subprogrammes are as follows:

1. Action in the area of human resources
   - Training and mobility
   - Hiring and incorporation
2. Action in the area of projects
   - Health research projects
   - Research projects in health technology assessment and health services
3. Action in science and technology infrastructures

The training and mobility subprogramme includes predoctoral grants for health research training. In 2009 a total of 62 grants were given, for a total of 967,200 Euros. In addition, 10 applications seeking predoctoral grants for training in health research management were approved, for a total of 156,000 Euros, along with 37 grants for study visits, for a total amount of 389,300 Euros. Within the hiring and incorporation subprogramme 51 postdoctoral contracts "Sara Borrell" were funded, totalling 1.8 million Euros, as were 34 SNS research contracts "Miguel Servet," for a total of 2.5 million Euros. This subprogramme also financed the hiring of research support technicians in the SNS, for a total of 963,500 Euros.

The subprogramme for health research projects has provided subsidies to 656 R&D projects, in the amount of 70.4 million Euros, and 15 INTRASALUD projects were also funded. These funds (6.7 million Euros) went to consolidated groups carrying out transnational health research. Also in 2009, 6.9 million Euros were used to fund 144 projects devoted to health technology assessment.

In 2009 the line of action focused on infrastructure awarded 35 grants for the acquisition of science and technology infrastructure, for a total value of 8.4 million Euros.

Introduction

Article 63 of the Law on Cohesion and Quality in the National Health System (hereinafter SNS, for its acronym in Spanish) provides that the Spanish Healthcare System Observatory will prepare an annual report on the state of the SNS, which will be presented by the Ministry of Health, Social Policy and Equality (MSPSI) to the Interterritorial Council of the SNS.

As in the past, an institutional committee and an editorial committee have been involved in the preparation of this report. The former is comprised of representatives of all the autonomous communities and INGESA (the body in charge of health care in Ceuta and Melilla), while the editorial committee is comprised of experts in the various subjects addressed.

This year the report is once again divided into a general section, which analyses the SNS as a whole, and another section that discusses the situation in the different regions of Spain. The second section was prepared by each of the autonomous communities and INGESA.

The reports furnished by the autonomous communities and INGESA focus on explaining the strategy and management instruments used by each of them and on describing three examples of best practices that deserve to be shared with others. Thus, the table of contents of these annexes is as follows:

1. Introduction.
2. Strategy followed by the regional health service.
3. Management contracts.
4. Other management formulas.
5. Best practices.

The table of contents of the general section was the subject of a fruitful discussion among the members of the editorial and the institutional committees, which agreed on the following chapters:

1. Summary.
2. Introduction.
3. Health status of the population.
4. Institutional description and analysis.
5. Resources and care activity.
6. Public health.
7. Pharmaceuticals and health products.
8. Quality.
9. Equality initiatives.
10. Clinical information management.
11. Professional regulation and training of health care personnel.
12. Research in the SNS.

In the writing of the general section, this year, like last year, the primary role was played by the experts of the MSPSI, who are civil servants that work in the ministerial divisions in charge of the various subjects addressed. In general, the sources of

information used are the National Statistics Institute (*Instituto Nacional de Estadística*), the Health Information Institute (*Instituto de Información Sanitaria*), the ministry's internal sources and information furnished by the autonomous communities for purposes of preparing this report. In some sections, such as the one on health expenditure, the data used are from 2008, because these are the most recent figures available.

Among the primary differences with respect to last year's report is the inclusion of the activity of the Spanish Agency for Food Safety and Nutrition in the chapter on public health and of the activity of the National Transplant Organisation in the chapter on resources and care activity. The chapter that offers an institutional analysis and description, in addition to examining the health expenditure, provides a review of the strategies followed by the regional health services and the instrument generally used to carry out the strategy: management contracts, also known as contract-programmes or management plans. This year this section also includes a summary of the activities performed by the Interterritorial Council of the SNS.

In its analysis of pharmaceutical consumption, this year's report uses for the first time the measurement unit DDD/1000/Day (defined daily dose per 1000 inhabitants per day) as a means to measure the consumption of active ingredients in Spain. In addition, the chapter on quality includes a section on best practices in the SNS.

It was decided that the chapter on clinical information management should include a description of the SNS central node, or data centre, which is the hardware and software infrastructure that facilitates the exchange of information, whether administrative or clinical, among the various SNS agents.

This year the report provides an exhaustive description of research in the SNS, and for this reason the relevant section is complemented by an annex containing information about the calls for applications by which applicants compete to receive funding from autonomous communities and private bodies; research applied to clinical practice; and research support units.

1 Health status of the population

1.1 Demographic characteristics of Spain's population

The resident population of Spain as of 1 January 2009 was 46,745,807, according to data from the municipal registers of inhabitants: 49.5% men and 50.5% women. With respect to 2001 the population had increased by slightly more than 5.5 million inhabitants, which represents a growth of 13.7%, as seen in Table 1.1.

The table also shows that the population increased in all age groups during this decade, except in the group aged 15 to 24 years, where it fell by 12.7%. This drop is a result of the continuous decrease in the birth rate in Spain's resident population in the last quarter of the century, which went from 18.8 births per 1000 inhabitants in 1975 to 9.9 births per 1000 inhabitants in 2000. The greatest population growth in the 2001-2009 period occurred in the group of children under the age of five, which increased by 41.0%. This increment is a reflection of the continuous growth in the birth rate during the present decade, from 10.0 births per 1000 inhabitants in 2001 to 11.4 births per 1000 inhabitants in 2008.

People aged 65 and over represented 16.5% of the population in 2009. This percentage is lower than the 2001 figure, which was 17.1%. Although the population aged 65 and over increased by 10.6% between 2001 and 2009, the percentage of growth in the younger population was greater and thus the weight of the population aged 65 and over in society as a whole has diminished.

Table 1.1 Resident population in Spain in 2001 and in 2009.

Age	2001	2009	Percentage increase
Total	41,116,843	46,745,807	13.7
0-4	1,719,673	2,424,045	41.0
5-14	4,130,199	4,393,835	6.4
15-24	5,869,991	5,125,006	-12.7
25-44	13,204,784	15,578,523	18.0
45-64	9,154643	11,441,494	25.0
65 and over	7,037,553	7,782,904	10.6

Source: National Statistics Institute. Statistical use of Municipal Registers of Inhabitants.

Natural growth – births minus deaths – experienced a significant and steady decline throughout the last quarter of the past century: it dropped from 10.4 per 1000 inhabitants in 1975 to 0.9 per 1000 inhabitants in 2000. However, starting in the present century this trend has reversed, with natural growth increasing from 1.1 per 1000 inhabitants in 2001 to 2.9 in 2008 (Table 1.2). An important part of this increment can be attributed to the massive arrival of population from countries where birth rates are higher than in the population born in Spain.

In effect, the resident foreign population in Spain numbered 1,370,657 in 2001 and 5,648,671 in 2009. This means that in 2001 this group represented 3.3% of the population total, while in 2009 it represented 12.1% of the total. These figures reflect the extraordinary growth of the foreign population in Spain, whose numbers were multiplied

by 4 between 2001 and 2009 (Table 1.3). Fifty percent of the foreign population residing in Spain in 2009 was aged between 25 and 44 and only 5% was aged 65 or older.

Table 1.2 **Birth rate, death rate and natural growth per 1000 inhabitants. Spain, 2001-2008.**

Year	Birth rate	Mortality rate	Natural growth
2001	9.95	8.84	1.11
2002	10.11	8.92	1.19
2003	10.49	9.16	1.33
2004	10.61	8.71	1.90
2005	10.71	8.93	1.78
2006	10.92	8.43	2.49
2007	10.94	8.59	2.35
2008	11.37	8.47	2.90

Source: National Statistics Institute and Health Information Institute.

Table 1.3 **Resident foreign population in Spain in 2001 and in 2009 and increment in 2009 with respect to 2001.**

Age	2001(a)	2009(b)	b/a
Total	1,370,657	5,648,671	4.1
0-4	50,888	283,943	5.6
5-14	121,415	522,999	4.3
15-24	199,563	815,821	4.1
25-44	651,107	2,807,918	4.3
45-64	236,216	935,060	4.0
65 and over	111,468	282,930	2.5

Source: National Statistics Institute. Statistical use of Municipal Registers of Inhabitants.

In any case, it must be noted that, depending on the autonomous community, the percentage of foreign population residing in Spain varies considerably (Table 1.4). The autonomous communities with the highest percentages in 2009 were Baleares, Comunidad Valenciana, Madrid, Murcia and Cataluña, with a foreign population of between 15.9% and 21.7%. In contrast, in Extremadura and Galicia foreigners represented less than 4% of the population.

Changes in natality can be studied more precisely by looking at the fertility rate, which indicates the number of births per 1000 women between the ages of 15 and 49. The trend here was similar to the one observed in the birth rate: a significant reduction occurred between 1975 (with 79.2 births per 1000 women between the ages of 15 and 49) and the year 2000 (when there were 38.1 births in the same group). Subsequently, the trend reversed, and the rate went from 38.5 births per 1000 women aged 15 to 49 in 2001 to 45.1 in 2008 (Table 1.5).

Nonetheless, it should be highlighted that there is a high degree of heterogeneity in the fertility rate from region to region. In 2008, the rate ranged from over 60 births per 1000 women aged 15 to 49 in Ceuta and Melilla, to around 50 in Cataluña, Murcia and Madrid, to around 30-35 in Asturias, Galicia, Castilla y León and Canarias.

Table 1.4 Resident population in Spain, by autonomous community of residence, 2009.

	Total	Foreign population	Percentage
Total	**46,745,807**	**5,648,671**	**12.1**
Andalucía	8,302,923	675,180	8.1
Aragón	1,345,473	172,138	12.8
Asturias	1,085,289	47,119	4.3
Baleares	1,095,426	237,562	21.7
Canarias	2,103,992	301,204	14.3
Cantabria	589,235	38,096	6.5
Castilla y León	2,563,521	167,641	6.5
Castilla-La Mancha	2,081,313	225,888	10.9
Cataluña	7,475,420	1,189,279	15.9
Comunidad Valenciana	5,094,675	889,340	17.5
Extremadura	1,102,410	37,223	3.4
Galicia	2,796,086	106,637	3.8
Madrid	6,386,932	1,063,803	16.7
Murcia	1,446,520	235,991	16.3
Navarra	630,578	70,627	11.2
País Vasco	2,172,175	132,865	6.1
La Rioja	321,702	46,931	14.6
Ceuta	78,674	3,550	4.5
Melilla	73,460	7,597	10.3

Source: National Statistics Institute. Statistical use of Municipal Registers of Inhabitants.

Table 1.5 Fertility rates by autonomous community. Spain, 2001 and 2008.

	2001	2008
National total	**38.5**	**45.1**
Andalucía	41.9	47.5
Aragón	36.0	44.5
Asturias	25.6	32.9
Baleares	42.9	45.8
Canarias	39.0	36.7
Cantabria	30.9	41.5
Castilla y León	30.0	36.5
Castilla - La Mancha	39.8	46.2
Cataluña	40.1	49.6
Comunidad Valenciana	39.6	45.5
Extremadura	38.6	40.4
Galicia	28.9	35.1
Madrid	40.5	48.2
Murcia	48.0	52.3
Navarra	41.1	47.8
País Vasco	32.8	41.7
La Rioja	35.6	46.2
Ceuta	51.2	62.5
Melilla	63.4	69.8

Source: National Statistics Institute. Statistical use of Municipal Registers of Inhabitants.

1.2 Socio-economic health determinants

One of the factors most closely related to a person's health is that person's education, measured normally in terms of the level of studies that have been completed. Over the last two decades in Spain, the population's average level of education has risen significantly. For example, between 1991 and 2008, the percentage of people aged 16 and over who had completed secondary or higher education rose from 42% in 1991 to 68% in 2008, as shown in Table 1.6.

Table 1.6 **Distribution (%) of the population aged 16 and over, by level of studies completed. Spain, 1991-2008.**

Level of studies	1991	1997	2001	2008
Illiterate	4.9	3.7	3.3	2.4
No education	15.4	13.1	12.2	8.9
Primary education	37.7	31.6	25.8	20.8
Secondary education	33.9	36.1	40.1	44.9
First cycle	..	20.7	23.0	24.8
Second cycle	..	15.4	17.1	20.1
Higher education	8.1	13.8	18.6	23.1
University	8.1	9.7	13.1	16.1
Other types of higher education	..	4.1	5.6	6.9

Source: National Statistics Institute and Health Information Institute

The percentage of men who have completed secondary or higher education increased from 45.4% in 1991 to 70.7% in 2008, while in the case of women the increase was from 38.9% in 1991 to 65.3% in 2008 (Table 1.7). In 2008, the percentage of men and women with higher education was very similar – 23.5% for men and 22.7% for women –, but the percentage of people with secondary education was higher in men – 47.2% – than in women – 42.6%.

Table 1.7 **Distribution (%) of men and women aged 16 and over, by level of studies completed. Spain, 1991-2008.**

Level of studies	1991	1997	2001	2008
Men				
Illiterate	2.8	2.2	2.0	1,6
No education	14.0	11.6	10.6	7,7
Primary education	37.9	31.6	25.2	20.0
Secondary education	36.7	38.1	42.4	47.2
Higher education	8.7	14.8	19.5	23.5
Women				
Illiterate	6.9	4.9	4.4	3,1
No education	16.7	14.3	13.7	10,1
Primary education	37.5	30.5	26.5	21.5
Secondary education	31.3	35.9	37.7	42.6
Higher education	7.6	14.3	17.8	22.7

Source: National Statistics Institute and Health Information Institute.

However, a more valid indicator of the increase in the population's average level of studies is the percentage of the population aged 25 to 64 who have completed at least the second cycle of secondary education – that is, the non-compulsory schooling that follows the compulsory years. In 2008, half of the population of that age group had completed non-compulsory secondary schooling or higher education, while in 1991 the figure was 38.2% (Table 1.8).

Table 1.8 **Percentage of population aged 25 to 64 that has completed at least the second cycle of secondary education. Spain, 1991-2008.**

	1991	1997	2001	2008
25-64 years	**38.2**	**33.5**	**40.4**	**51.2**
25-34 years	69.1	51.2	57.5	65.0
35-44 years	38.3	38.5	45.3	56.7
45-54 years	20.6	21.9	29.5	45.0
55-64 years	12.0	11.9	17.5	29.1

Source: National Statistics Institute and Health Information Institute.

The level of studies completed by the population shows a high degree of geographical variation: in Navarra, Madrid and País Vasco, the percentage of the population aged 16 and over with higher education was around 30% in 2008, while in Extremadura, Castilla-La Mancha, Ceuta and Melilla it was around 17% (Table 1.9).

Table 1.9 **Percentage of population aged 16 and over with higher education, by autonomous community. Spain, 2008.**

	2008
National total	**23.1**
Andalucía	19.1
Aragón	24.2
Asturias	24.4
Baleares	17.0
Canarias	19.0
Cantabria	25.9
Castilla y León	22.7
Castilla - La Mancha	16.6
Cataluña	23.1
Comunidad Valenciana	21.5
Extremadura	16.7
Galicia	22.1
Madrid	31.5
Murcia	19.6
Navarra	28.8
País Vasco	33.7
La Rioja	23.8
Ceuta	16.2
Melilla	17.0

Source: National Statistics Institute and Health Information Institute.

One of the most relevant socio-economic features of the past two decades has been the increasing incorporation of women into the labour market; while in the case of men the activity rate has remained stable at around 68%, in the case of women, it rose from 34.7% in 1991 to 51.7% in 2009 (Table 1.10).

Table 1.10 Activity rate, expressed in percentages. Spain, 1991-2009.

	1991	1997	2001	2009
Both sexes	50.8	51.6	53.0	59.7
Men	68.0	65.1	66.2	68.1
Women	34.7	38.9	40.4	51.7

Source: National Statistics Institute.

The unemployment rate in 2009 was 18.8%, and it affected women (19.07%) in greater proportion than it did men (18.6%) (Table 1.11).

Table 1.11 Activity rate, expressed in percentages. Spain, 1991-2009.

	1991	1997	2001	2008	2009
Both sexes	16.3	20.6	10.6	11.3	18.8
Men	12.1	15.8	7.5	10.1	18.6
Women	24.1	28.2	15.2	13.0	19.1

Source: National Statistics Institute.

In 2009, Madrid, Baleares and Canarias had the highest rates of activity, and the lowest rates were in Melilla, Asturias and Extremadura. The highest rates of unemployment were seen in: Canarias, Andalucía and Ceuta, while the lowest rates were in: Navarra, País Vasco and Cantabria (Table 1.12).

Table 1.12 Activity rate and unemployment rate by autonomous community. Spain, 2009.

	Activity rate	Unemployment rate
National total	**59.7**	**18.8**
Andalucía	58.3	26.3
Aragón	58.7	13.2
Asturias	51.5	14.2
Baleares	64.5	19.5
Canarias	62.8	26.9
Cantabria	55.9	12.6
Castilla y León	54.5	14.5
Castilla - La Mancha	57.6	19.2
Cataluña	62.2	17.0
Comunidad Valenciana	61.1	22.5
Extremadura	53.3	21.2
Galicia	54.7	12.8
Madrid	64.6	14.6
Murcia	60.7	22.4
Navarra	59.7	10.5
País Vasco	57.4	11.7
La Rioja	59.9	13.6
Ceuta	54.8	24.5
Melilla	51.7	21.6

Source: National Statistics Institute.

Life expectancy

Life expectancy (LE) is the most traditional and most commonly used indicator to assess the state of health of a given population. It is related not only to the level of health but also to the population's social and economic circumstances. It is a hypothetical measure, since it does not measure the real probabilities of survival. It is calculated based on current mortality rates, which of course are subject to changes over time. Its advantage lies in the fact that it is independent of the age structure of the population, and can thus be used to compare different countries or regions and to study changes over the course of time.

In Spain in 2007 LE at birth was 81.1 years, 77.8 for men and 84.3 for women (Table 1.13). LE at age 65 was 20 years, 17.8 and 21.9 for men and women respectively.

Table 1.13 **Life expectancy and healthy life expectancy at birth and at age 65, by sex. Spain, 2000/02 and 2007.**

	Life expectancy		Healthy life expectancy	
	2000	2007	2002	2007
At birth				
Total	79.4	81.1	55.1	55.3
Men	76.1	77.8	56.3	57.2
Women	82.8	84.3	53.9	53.4
At age 65				
Total	18.8	20.0	7.0	7.9
Men	16.7	17.8	7.4	8.6
Women	20.6	21.9	6.6	7.2

Source National Statistics Institute and Health Information Institute.

Table 1.14 **Life expectancy and healthy life expectancy at birth, by autonomous community. Spain, 2000 and 2007.**

	Life expectancy		Healthy life expectancy	
	2000	2007	2002	2007
Spain	**79.4**	**81.1**	**55.1**	**55.3**
Andalucía	78.3	79.8	51.2	54.8
Aragón	80.1	81.7	60.3	59.1
Asturias	79.2	80.4	50.9	53.8
Baleares	78.7	81.6	51.4	57.8
Canarias	77.7	80.4	47.5	54.5
Cantabria	79.8	81.1	54.7	59.6
Castilla-La Mancha	80.1	81.5	51.3	55.2
Castilla y León	80.8	82.1	59.5	61.3
Cataluña	79.1	81.6	56.0	55.2
Comunidad Valenciana	78.8	80.6	59.3	52.5
Extremadura	79.0	80.6	52.9	52.6
Galicia	79.5	81.0	48.6	47.8
Madrid	80.4	82.5	57.7	58.6
Murcia	78.6	80.5	54.0	50.7
Navarra	80.7	82.5	60.2	57.6
País Vasco	79.9	81.6	59.5	59.8
La Rioja	80.5	81.8	62.3	62.8
Ceuta y Melilla	78.0	79.5	51.2	52.8

Source National Statistics Institute and Health Information Institute.

Table 1.14 shows the estimated LE for the years 2000 and 2007 in the country's different autonomous communities, and Table 1.15 shows the estimated LE in 2007 in the EU and the increase in the LE between 1990 and 2007.

Table 1.15 **Life expectancy at birth in 2007 in the countries of the European Union (UE) and increase in life expectancy between 1990 and 2007.**

	Healthy life expectancy in 2007*	Increase between 1990 and 2007
Italy	81.6	4.4
France	81.1	3.5
Spain	81.1	4.2
Sweden	81.1	3.3
Cyprus	80.7	..
Holland	80.5	3.4
Austria	80.5	4.5
EU-15	80.3	3.8
Malta	80.1	3.9
United Kingdom	79.9	3.9
Ireland	79.9	5.0
Luxembourg	79.7	4.2
Finland	79.7	4.6
Germany	79.7	4.1
Greece	79.6	2.4
Belgium	79.5	3.2
EU	79.1	3.9
Slovenia	78.5	4.5
Portugal	78.3	4.2
Denmark	78.1	3.0
Czech Republic	77.1	5.6
Poland	75.4	4.4
EU-12	74.5	3.7
Slovakia	74.3	3.2
Romania	73.3	3.5
Hungary	73.0	3.6
Estonia	72.9	3.0
Bulgaria	72.6	1.1
Latvia	71.2	1.7
Lithuania	71.0	-0.5
Notes	EU-15: the 15 states belonging to the EU before 2004 EU-12: the 12 states that joined the EU after 2004	
Source	National Statistics Institute and Health Information Institute.	

Healthy life expectancy

The significant relative increase in the number of older citizens and the prevalence of chronic diseases and incapacity (consequences of the rise in LE) have made health indicators based solely on mortality insufficient. For this reason a series of indicators have been developed that take into consideration some measurement of the population's health or incapacity. Among these indicators is the Healthy Life Expectancy (HLE), which uses self-perceived health to adjust the expected years of life. Thus, the HLE at birth indicates the average number of years that an individual in a given population could expect to live in good health, if mortality and self-perceived health rates were to remain the same.

In Spain in 2007 HLE at birth was 55.3 years, 57.2 for men and 53.4 for women (Table 1.13). Compared to 2002, HLE in 2007 was 0.9 years higher for men, while for

women a decrease of 0.5 years was observed during the same period. As for HLE at age 65, it was 7.9 years, 8.6 and 7.2 for men and women respectively (Table 1.13). Compared to 2002, in 2007 the HLE at age 65 had increased by 0.9 years, with the increase being greater among men (1.2 years) than among women (0.6).

Looking at the different autonomous communities, in 2007 the difference between the highest and the lowest HLE was 15 years (Table 1.14).

1.3 Mortality

Infant mortality

Even though in economically-developed countries the infant mortality rate has lost sensitivity in its ability to indicate the socio-economic level and the health status of a given population, this indicator continues to be vital in any assessment of a population's situation regarding health.

Infant mortality in Spain has continued to fall steadily during this decade, despite the already low rate: if in 2001 the rate was 4.1 deaths in infants under one year of age per 1000 live births, in the year 2008 it was 3.3 (Table 1.16).

Table 1.16 Infant mortality rate, by autonomous community. Spain, 2001 and 2008

	2001	2008
Total	**4.1**	**3.3**
Andalucía	4.6	3.8
Aragón	5.0	2.4
Asturias	5.4	3.9
Baleares	5.4	3.9
Canarias	5.2	3.9
Cantabria	1.9	3.2
Castilla-La Mancha	4,0	3.3
Castilla y León	2.6	3.0
Cataluña	3.3	3.2
Comunidad Valenciana	3.7	3.6
Extremadura	4.4	3.6
Galicia	3.6	3.1
Madrid	3.8	2.7
Murcia	5.5	3.4
Navarra	3.0	2.3
País Vasco	3.4	2.9
La Rioja	5.4	5.4
Ceuta	3.1	4.3
Melilla	7.9	4.8

Source National Statistics Institute and Health Information Institute.

The perinatal mortality rate is a more sensitive indicator than infant mortality when it comes to assessing health care coverage and quality, especially maternal and infant care.

Perinatal mortality in Spain has continued to drop in the present decade. If in 2001 the rate was 5.6 perinatal deaths per 1000 live births, in 2008 the number was 4.4 (Table 1.17). Like the infant mortality rate, this indicator shows geographical variation: Madrid, with a rate of 3.1, and Canarias, Galicia and Melilla, with 3.2, were the communities with the lowest figures, while Asturias, with 7.3, and Ceuta, with 11.1, had the highest perinatal mortality rates.

Table 1.17 Perinatal mortality rate, by autonomous community. Spain, 2001 and 2008.

	2001	2008
Total	**5.6**	**4.4**
Andalucía	6.4	5.1
Aragón	6.1	4.4
Asturias	6.8	7.3
Baleares	6.7	4.6
Canarias	5.8	3.2
Cantabria	2.6	4.6
Castilla-La Mancha	5.3	4.5
Castilla y León	5.5	3.4
Cataluña	5.3	4.7
Comunidad Valenciana	4.9	4.4
Extremadura	6.2	4.0
Galicia	4.3	3.2
Madrid	4.9	3.1
Murcia	5.7	4.3
Navarra	4.5	3.4
País Vasco	5.7	5.1
La Rioja	7.8	6.2
Ceuta	7.1	11.1
Melilla	10.6	3.2

Source National Statistics Institute and Health Information Institute.

Table 1.18 shows the rates of infant mortality and perinatal mortality around 2007 for the EU-15 (the 15 countries belonging to the EU before 2004), the EU-12 (the 12 countries that joined the EU after 2004) and for Spain, along with the percentage of change in the rates between 1990 and 2007. The rates in the EU-15 countries are lower than in the EU-12 group, although the latter showed a greater decline between 1990 and 2007 than the former. The rates in Spain were lower than in the EU-15 as a whole, and they also showed a higher percentage of decline between 1990 and 2007.

Table 1.18 Infant mortality rate and perinatal mortality rate per 1000 live births around 2007 and percentage of change between 1990 and 2007. EU countries and Spain.

	Countries of the EU-15		Countries of the EU-12		Spain	
	2007	% of change between 1990 and 2007	2007	% of change between 1990 and 2007	2007	% of change between 1990 and 2007
Infant mortality	4.0	-48.0	7.4	-57.0	3.5	-65.0
Perinatal mortality	5.9	-24.0	6.3	-52.0	4.5	-40.0

Notes EU-15: the 15 states belonging to the EU before 2004; EU-12: the 12 states that joined the EU after 2004

Source National Statistics Institute and Health Information Institute.

Mortality by cause of death

In 2008 there were 386,324 deaths in Spain, about twenty-six thousand more than at the beginning of the decade. Approximately 80% of the deaths were due to five large groups of causes of death: diseases of the circulatory system, cancer, diseases of the respiratory system, diseases of the digestive system, and external causes such as injuries and poisoning (Table 1.19).

Table 1.19 **Mortality by cause of death, proportional mortality and mortality rate per 100,000 inhabitants. Spain, 2001 and 2008.**

	Deaths	Percentage	Mortality rate
2001			
Total	**360.131**	**100.0**	**884.4**
Circulatory system diseases	124.389	34.5	305.5
Cancer	94.363	26.2	231,7
Respiratory system diseases	37.362	10.4	91.8
Digestive system diseases	18.407	5,1	45.2
External causes	15.999	4.4	39.3
2008			
Total	**386.324**	**100.0**	**847.3**
Circulatory system diseases	122.793	31.8	269.3
Cancer	100.675	26.1	220.8
Respiratory system diseases	44.200	11.4	96.9
Digestive system diseases	19.476	5.0	42.7
External causes	15.289	4.0	33.5

Source National Statistics Institute and Health Information Institute.

Around one third of deaths were due to diseases of the circulatory system and around one fourth were due to cancer. Mortality rates have fallen steadily over the last three decades in the case of diseases of the circulatory system and since the 1990s in the case of cancer.

The distribution by age of these causes of death varies, as shown in Table 1.20. Around 80% of the deaths due to diseases of the circulatory system and to diseases of the respiratory system occurred in persons over the age of 74 and the rest were mainly in the group aged 45 to 74. As for cancer, approximately half of the deaths occurred in the group over the age of 74, while practically all of the other half was in the 45 to 74 year group. As regards diseases of the digestive system, 63.3% of deaths occurred in people over the age of 74 and 33.3% took place in the 45 to 74 group. As for deaths by external causes, one third of them took place in the group aged 15 to 44, another third in the 45 to 74 group and the other third in the group aged over 74.

Table 1.20 **Percentage distribution by age. Main causes of death. Spain, 2008.**

Age	Circulatory system diseases	Cancer	Respiratory system diseases	Digestive system diseases	External causes
<15	0.1	0.2	0.1	0.1	1.7
15-44	1.4	3.1	1.5	3.3	32.2
45-74	20.2	47.0	16.6	33.3	33.0
75 and over	78.4	49.8	81.8	63.3	33.0

Source National Statistics Institute and Health Information Institute.

1.4 Accidents

Victims of traffic accidents

In 2008 in Spain there were 134,047 victims of traffic accidents, twenty-one thousand fewer than in 2001. The rate of victims per 1000 accidents and the rate of victims per 100,000 inhabitants fell by 7% and 23%, respectively, according to the statistics compiled by the National Traffic Authority (DGT).

The number of traffic accident fatalities experienced an even more significant decline: the figure went from 5517 in 2001 to 3100 in 2008, which means a drop of 40% in the rate of deaths per 1000 accidents and of 50% in the rate of deaths per 100,000 inhabitants.

Victims of workplace accidents

So far the present decade has shown a steady decrease in the frequency of accidents of this type. From 42.8 accidents per million hours worked in 2001, the figure has fallen to 30.8 in 2008. Similarly, the frequency of fatal workplace accidents during working hours dropped from 4.7 per million hours worked in 2001 to 3.1 in 2008.

The construction sector has the highest frequency of workplace accidents. However, this is also the sector that has seen the greatest decline in the accident frequency index: the figure went from 102.7 accidents per million hours worked in 2001 to 62.4 in 2008. Industry is the sector with the second highest frequency of accidents: in 2008 the frequency index was 52.7, according to Ministry of Labour statistics.

Victims of accidents with other causes (drownings, falls, burns, intoxications)

In contrast to the situation regarding traffic accidents, the rate of death from accidents involving drownings, falls, burns and intoxications has fallen only slightly over the past three years. A decrease in mortality from drowning, submersion and suffocation is observed, but mortality from accidental falls has increased slightly (Table 1.21).

Table 1.21 Rate of mortality from accidents, all ages.

	2006	2007	2008
Accidental falls	3.737	3.878	4.047
Accidental drowning, submersion and suffocation	6.036	5.725	4.952
Accidents involving fire, smoke and hot substances	0.449	0.423	0.443
Accidental poisoning by psychopharmaceuticals or drugs of abuse	1.175	1.288	1.314
Other accidental poisonings	0.529	0.421	0.616
Total	**11.926**	**11.735**	**11.372**

Source: National Statistics Institute and National Institute of Consumer Affairs. MSPSI.

The National Institute of Consumer Affairs presented the Home and Leisure Accident (HLA) Report 2007. According to this report, during the year an estimated 1,754,335 Spaniards were involved in an accident defined as an HLA, which means that almost 4 out of 100 individuals had a mishap of this type (Table 1.22). In 2007 accidents of this nature occurred in 11.6% of Spanish homes (7500 accidents HLA in 64,394 homes contacted).

Table 1.22 Accident distribution and penetration by age group in the national total, 2007.

Base: 7500 = 100%	Total % Accidents	Estimate of affected individuals	Population per interval	% Population	% Incidence
Under 1 year	0.16	14,970	424,058	0.94	0.033
Aged 1 to 4	3.68	55,905	1,813,464	4.01	0.124
Aged 5 to 14	10.52	159,527	4,243,305	9.39	0.353
Aged 15 to 24	15.92	268,179	5,185,722	11.47	0.638
Aged 25 to 44	38.34	680,916	15,172,137	33.57	1.506
Aged 45 to 64	20.03	345,487	10,830,220	23.96	0.764
65 and over	11.05	209,351	7,531,826	16.66	0.463
TOTAL	**100**	**1,754,335**	**45,200,737**	**100**	**3.88**

Source: National Institute of Consumer Affairs. MSPSI.

Table 1.23 Accident mechanism by sex and age (%).

Base:7500 = 100%	Total	Sex		Age (years)						
		Male	Fem	<1	1-4	5-14	15-24	25-44	45-65	+65
0-Fall	**44.1**	42.7	45.1	76.9	53.4	55.3	40.1	34.9	42.9	70.6
1-Blow or collision with object. person. animal	**13.0**	16.3	10.3	7.7	14.8	21.7	19.0	12.2	7.7	8.7
2-Crush. cut. perforation	**22.6**	23.7	21.8	7.7	10.0	10.6	19.7	29.3	27.0	10.3
3-Foreign object in natural orifice	**1.5**	2.0	1.0	7.7	4.1	1.6	1.5	1.4	1.4	0.4
4-Asphyxiation	**0.9**	0.7	1.1	-	3.1	0.4	0.6	0.9	0.9	0.9
Drownings and near drownings					1.7					
5-Effects of chemical products	**3.5**	3.5	3.5	-	5.9	4.5	4.2	3.4	3.3	1.1
Poisoning by solid substance					2.1	3.1				
Poisoning by liquid substance					3.1					
6-Thermal effects	**9.6**	5.2	13.1	-	6.6	3.5	8.9	12.1	11.4	5.2
Hot liquid	**5.5**									
Hot objects	**2.6**									
Fire. flame	**0.8**									
7-Effects of electricity/radiation and other energy sources	**0.5**	0.6	0.5	-	1.0	0.1	0.8	0.6	0.4	0.4
8-Acute exhaustion of the body or a body part	**4.2**	5.1	3.4	-	1.0	2.1	5.0	4.8	4.7	2.5
9-Other injury mechanism or not specified	**0.1**	0.2	0.1	-	-	0.1	0.1	0.2	0.1	-

Source: HLA Report 2007. National Institute of Consumer Affairs. MSPSI.

The most frequent home and leisure accidents were: falls (44.1%), crushing, cuts and perforations (22.6%), blows or collisions (13.0%), thermal effects or burns (9.6%) and physical effort or exhaustion (4.2%). It is also worth noting that accidents from asphyxiation took place largely in the age group 1-4 years (3.1%) and of these, over half (1.7%) were drownings or near drownings (Table 1.23).

This report examines injuries that take place at home or within its immediate surroundings and also during leisure, sports, school or domestic activities. It does not include data related to accidents caused by: work-related reasons; traffic; organized sports activities; natural elements; railway, maritime or air activities, or any accidents related to illness, self-inflicted injury or violence.

1.5 Subjective perception of health

One of the most frequently-used health measures is the subjective perception that individuals have of their own health, a measure that has proven its validity and predictive capacity in terms of the use of services and in terms of mortality.

The figures of men and women who deemed their health to be good or very good in 2006 in the European Union are shown in Table 1.24. The data presented, published by Eurostat, is from the Statistics on Income and Living Conditions (SILC), which includes surveys of similar design and methodology conducted on representative population samples in countries of the European Union.

Table 1.24 **Percentage of men and women who deem their health to be good or very good in EU countries, 2006.**

	Men	Women
Ireland	84.4	81.9
Holland	80.0	74.0
Greece	79.9	74.0
Cyprus	79.1	73.3
Sweden	78.6	73.5
United Kingdom	78.1	75.3
Belgium	77.9	70.9
Denmark	77.6	72.6
Malta	77.3	72.8
Luxembourg	76.2	72.3
Austria	73.1	70.9
France	72.3	66.8
Spain	71.3	64.8
Finland	69.1	68.3
EU	67.8	61.7
Germany	63.5	57.8
Czech Republic	62.8	56.3
Italy	60.8	53.2
Slovenia	59.6	53.3
Poland	58.7	51.0
Slovakia	56.8	48.2
Estonia	56.5	50.8
Portugal	53.3	43.4
Hungary	52.2	44.9
Lithuania	48.8	38.9
Latvia	47.5	36.1
Notes	EU: figure for all the countries included in the table. No figures: Bulgaria and Romania.	
Source	Health Information Institute. MSPSI.	

In the set of 25 countries shown in the table, 67.8% of men and 61.7% of women deem their health to be good or very good. However, the percentage varies a great deal from country to country, the highest and the lowest values differing by 37% in the case of men and 46% in the case of women.

In all countries the percentage of men who consider their health to be good or very good is higher than that of women.

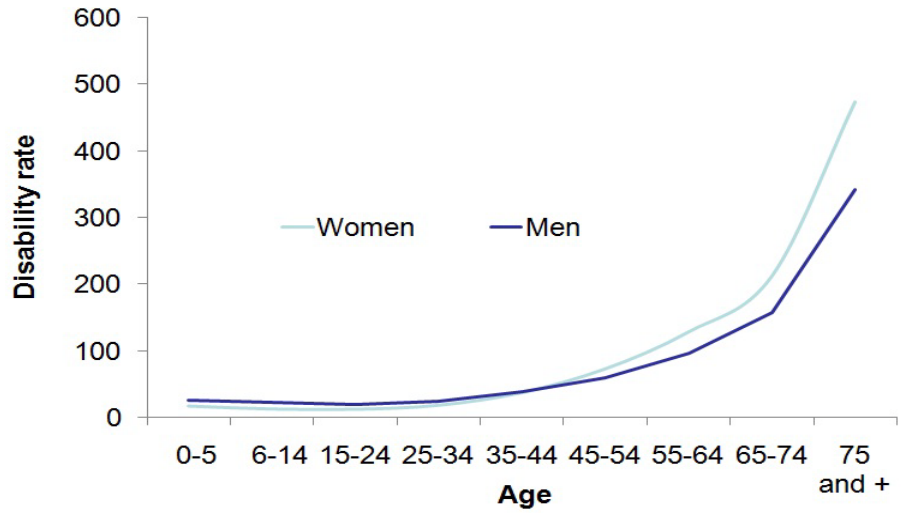
1.6 Disability

Monitoring disability in Spain is possible thanks to two specific surveys carried out by the National Statistics Institute, one in 1999 and another in 2008.

In 2008, the percentage of the Spanish population that suffered some type of disability was 85.5‰. The rate of disability per 1000 inhabitants was greater in women (101) than in men (69.5). This rate of disability represents a reduction of more than 4‰ compared to 1999. This reduction was greater among men, in whom the rate decreased by 7‰, than among women, in whom it fell by just 2‰ (Figure 1.1).

The disability rate increases considerably in people aged 75 and over, is more frequent in women and has been decreasing for both sexes since 1999.

Figure 1.1 **Population with some type of disability per 1000 inhabitants, by sex and age. Spain, 2008.**



Source Health Information Institute. MSPSI.

1.7 Unhealthy lifestyle habits

Tobacco use

For the past two decades the percentage of the population aged 16 and over that smokes has been falling; in 2001 it was 34.5%, while in 2006/07 it was 29.5%. Table 1.25 shows these percentages by age and sex. For both sexes, the highest percentage of smokers was in the 25-44 age group (43.6% in men and 33.9% in women). The prevalence of cigarette use is greater among men than among women in all age groups, except in the group aged 16 to 24 years.

Since 2001, the prevalence of cigarette use has diminished in both men and women, although the decrease has been slightly greater in men. The reduction in the prevalence

of smoking between 2001 and 2006/07 was observed in all age groups in men. However, in women aged 45 to 64 and aged 65 and over the percentage of smokers increased during this period.

Table 1.25 **Percentage of smokers and percentage of drinkers, by age and sex. Spain, 2001 and 2006/07.**

	Men		Women	
	2001	2006/07	2001	2006/07
Cigarette use				
Total	42.2	35.3	27.3	23.9
16-24	40.9	31.1	42.7	32.7
25-44	52.8	43.6	43.6	33.9
45-64	42.8	37.0	17.5	22.8
65 and over	19.2	15.4	2.0	3.1
Alcohol consumption (*)				
Total	68.5	70.2	37.2	41.8
16-24	61.8	61.9	47.4	46.5
25-44	75.0	72.6	45.1	47.1
45-64	72.4	73.6	36.6	44.1
65 and over	54.4	65.1	18.4	26.9
Notes	(*) Consumption of alcoholic beverages within the past two weeks			
Source	Health Information Institute. MSPSI.			

Alcohol consumption

Around 56% of the Spanish population aged 16 and over stated in 2006/07 that they had consumed alcoholic beverages within the last two weeks. The percentage was greater among men (70%) than among women (42%) (Table 1.25). In terms of age, men aged 45 to 64 was the group with the largest percentage of alcohol consumers (73.6%), while in women the largest percentage (47.1%) was found in the 25 to 44 age group. Compared to 2001, the percentage of drinkers increased slightly in 2006/07, in both sexes and in all age groups except men aged 25 to 44 years and women aged 16 to 24 years.

Consumption of other drugs

In 2007, cannabis was the substance most frequently consumed by the population aged 15 to 64 (10%). Three percent said they had consumed cocaine within the past twelve months and 1.3% reported use of hypnosedatives (Table 1.26).

For the 2001 – 2007 period, in the Spanish population aged 15 to 64 substance use fell, with the exception of cannabis and cocaine; this tendency towards reduced consumption was also observed in the population aged 14 to 18, with the exceptions of cannabis and heroin.

Table 1.26 **Percentage of population aged 14 - 18 and 15 - 64 who report having consumed different types of psychoactive substances within the last twelve months. Spain, 2000-2007.**

	Population aged 14 to 18		Population aged 15 to 64	
	2000	2006	2001	2007
Hypnosedatives *	5.0	4.8	2.8	1.3
Cannabis	28.8	29.8	9.2	10.1
Ecstasy	5.2	2.4	1.8	1.1
Hallucinogenic	4.2	2.8	0.7	0.6
Amphetamines	3.5	2.6	1.1	0.9
Cocaine	4.8	4.1	2.5	3.0
Heroin	0.4	0.8	0.1	0.1
Volatile inhalants	2.5	1.8	0.1	0.1
Notes	(*) Tranquillisers and sleeping pills sold without a prescription.			
Source	Spanish National Plan on Drugs. MSPSI.			

Sedentarism

About 40% of the Spanish population aged 16 and over stated in 2006/07 that they did not engage in any physical activity during their free time. Sedentarism was greater in women (42.4%) than in men (36.4%) for all age groups (Table 1.27). The most notable differences in this regard were seen in the youngest and in the oldest groups: around 28% of men aged 16 to 24 and aged 65 and over said they were sedentary; for women the percentage was 44%.

There appears to be a downward trend, despite the high percentages of people who live a sedentary lifestyle, and the fall is somewhat greater among women. Between 2001 and 2006/07 the percentage of sedentary women fell by 10%, while in men it fell by 5%; the exception might be found in younger men, in whom the prevalence of sedentarism may be increasing.

1.8 Obesity

For the past two decades obesity has been becoming more prevalent in Spain. In the year 2007, just over 15% of the Spanish population aged 18 and over was obese; the percentage was slightly higher among men (15.6%) than among women (15.1%), and the percentage of obese population increased with age in both sexes.

In the 2001-2007 period, the prevalence of obesity increased in all age groups, with the exception of women aged 45 and over; the increase was greatest in men aged 45 to 64, in whom prevalence rose by 5% (Table 1.27).

Table 1.27 **Percentage of sedentary population and percentage of obese population, by age and sex. Spain, 2001-2006/07.**

	Men		Women	
	2001	2006/07	2001	2006/07
Sedentarism				
Total	**41.2**	**36.4**	**52.2**	**42.4**
16-24	25.9	28.2	49.9	44.5
25-44	42.9	39.5	50.2	45.1
45-64	48.0	40.2	48.0	36.8
65 and over	41.7	28.6	61.9	43.9
Obesity (*)				
Total	**12.4**	**15.6**	**14.1**	**15.1**
18-24	3.7	5.4	2.1	5.3
25-44	10.5	12.1	7.0	10.1
45-64	16.3	21.3	21.5	19.0
65 and over	17.4	21.0	26.9	26.0

Notes: (*) Body mass index ≥ 30 kg/m2.

Source: Health Information Institute. MSPSI.

2 Institutional description and analysis

2.1 Institutional description and analysis

Ministry of Health and Social Policy

The year 2009 was characterised by important changes in the structure and responsibilities of the Ministry of Health and Consumer Affairs, which became the Ministry of Health and Social Policy.[1] The new ministry assumed the competencies of the former Ministry and also those of the former State Secretariat for Social Policy, Family and Disability and Dependency Care. This fusion, along with the need to reinforce the role of the Ministry as an instrument for cohesion within the SNS, leadership in the promotion of new technologies and quality improvement, impelled a re-organisation of the Ministerial departments. The principal modification in terms of organic structure is the assignment of responsibilities in the areas of drug dependence and consumer affairs to the Secretariat General of Social Policy and Consumer Affairs, and it is for this reason that the Directorate General of Consumer Affairs and the Directorate General of the National Plan on Drugs now fall under the responsibility of this Secretariat General. Other significant changes include the transfer of the Directorate General of Advanced Therapies and the Directorate General of the Quality Agency to the Secretariat General of Health.

Interterritorial Council of the SNS

The Interterritorial Council of the SNS (CISNS)[2] is the standing body whose mission is to ensure proper co-ordination, co-operation, communication and information among the 17 regional health services and between these services and the central government. Its purpose is to promote cohesion in the SNS by guaranteeing the effective and equitable exercise of citizen rights throughout the country. Comprising it are the Minister of Health and Social Policy, who acts as President, and all of the Regional Ministers of Health, one of whom serves as Vice President. The Council has a Secretary, designated by the plenum at the proposal of the Minister. This position is currently held by the Secretary General of Health.

The CISNS hears, debates and, where appropriate, issues recommendations on essential functions in the configuration of the SNS, such as the incorporation of new services and benefits or the designation of Reference Centres, Services and Units (CSUR); on advisory, planning and evaluation functions in the SNS; on functions related

[1] Royal Decree 1041(*Real Decreto 1041/2009, de 29 de junio, por el que se desarrolla la estructura orgánica básica del Ministerio de Sanidad y Política Socia)l* and modification of Royal Decree 438 (*Real Decreto 438/2008, de 14 de abril por el que se aprueba la estructura orgánica básica de los departamentos ministeriales*).
[http://www.boe.es/boe/dias/2009/06/30/pdfs/BOE-A-2009-10761.pdf]

[2] Art. 69 of the Law on the Cohesion and Quality of the SNS (*Ley 16/2003, de 28 de mayo, de cohesión y calidad del Sistema Nacional de Salud*).
[http://www.msc.es/organizacion/sns/planCalidadSNS/pdf/transparencia/LEY_COHESION_Y_CALIDAD.pdf]

to SNS co-ordination and, finally, on functions related to co-operation between the national government and the autonomous communities.

The CISNS operates in plenary sessions and also through delegated committees. It can create any committee or working group deemed necessary for the preparation and study of the questions submitted to it for consideration. The plenum must meet at least four times a year. It adopts resolutions by consensus and such resolutions can take the form of recommendations. Co-operation accords for joint actions in health care take the form of SNS agreements. The delegated committee meets prior to the plenary sessions to study and prepare the subjects that will be addressed by the plenum. Answerable to this delegated committee are the standing commissions, reporting committees and working groups. The CISNS must remit an Annual Report on its activities to the Senate.

CISNS activity in 2009

CISNS activities in 2009 are summarised in Table 2.1. Over the course of the year CISNS held eight plenary sessions, of which five were monographic. Four of the monographic sessions were devoted to the situation resulting from the flu pandemic caused by the virus A/H1N1. In these sessions, the plenum adopted the resolutions necessary to respond to the situation with homogenous criteria throughout national territory, based on WHO and EU decisions, and on scientific knowledge.

The need for specialists in the SNS during the 2008-2025 period was the topic of another monographic session. In the other three sessions, which were ordinary sessions, important resolutions were adopted. Among the resolutions pertaining to the flu pandemic, adopted on 27 March, 1 May, 22 July, 31 August, and 22 October, special mention should go to the ones aimed at reinforcing co-ordination between the MSPS and the autonomous communities, the analysis of EU and WHO guidelines, the information policy based on transparency, co-ordination and veracity, and the adoption of the measures recommended by the CISNS Commission on Public Health. It should also be pointed out that it was decided that the starting date of the school year would not be changed, since there were no specific recommendations to this effect by the WHO nor were there epidemiological reasons that made doing so advisable. In the plenum held on 31 August a single calendar was established for vaccination against the seasonal flu. The risk groups eligible for the A/H1N1 vaccination were also determined: pregnant women, patients over six months of age with chronic illness, health care personnel and the personnel working in essential services.

Other significant CISNS resolutions in 2009 include adoption of the criteria to be used in the distribution of funds to the autonomous communities to finance actions in health: emerging and re-emerging diseases and those of particular relevance; programmes related to the National AIDS Plan; programmes for the development of policies conducive to cohesion in health care; health education to promote the rational use of pharmaceuticals, programmes targeting quality improvement in care for polymedicated patients. The CISNS prepared reports regarding the COPD strategy, the rare disease strategy and evaluation and revision of the cancer and mental health strategies.

The designation of Reference Centres, Services and Units of the SNS (CSUR) to attend cases of pathologies or procedures in the area of liver, kidney, cardiopulmonary, pulmonary, cardiac and pancreas transplants was also the object of CISNS resolutions. In addition, the proposal on new pathologies and procedures in the areas of cardiac surgery,

cardiology, neurophysiology, neurology that must be attended in CSUR was approved, as were the criteria to be used in designating CSUR for such processes.

Table 2.1 Activities of the CISNS in 2009.

PLENARY SESSIONS	ORDINARY SESSIONS: 3 MONOGRAPHIC SESSIONS: 5 - 4 on Influenza "A" - 1 on specialist needs
RESOLUTIONS	41
REGULATORY PROJECTS WITH REPORTS BY THE CISNS	ROYAL DECREES: 7 MINISTERIAL ORDERS: 3
MEETINGS OF COMMISSIONS AND WORKING GROUPS	108 (54 of them on Influenza "A")

Source: Information provided by the D.G. Professional Regulation, Cohesion in the SNS and Executive Inspection. Ministry of Health, Social Policy and Equality (MSPSI).

Strategy in the SNS

The Annual Report on the SNS must describe, even if just briefly, the main objectives set by the different autonomous communities and the strategies they use to reach them. To this end all the autonomous communities and INGESA (the National Institute of Health Management, the body in charge of providing health care in Ceuta and Melilla) were asked to provide a summary of the strategy used by that regional health service. These reports are included in the annexes corresponding to each autonomous community and represent a valuable source of information on strategic planning in the SNS.

All of the regional health services strive to create an organization that is citizen or patient-focused. However, some differences exist in the way that such objectives are to be reached. Some autonomous communities put this strategy into effect by explicitly furthering the rights of citizens and patients, sometimes even with new legislation, while others do so in an implicit fashion, but using specific actions and programmes that serve to advance their commitments.

Each autonomous community's health plans and steering plans must be implemented in everyday practice by means of appropriate clinical and quality management. Process management, accreditation, continuous improvement programmes, efforts towards more rational use of pharmaceuticals, certification by ISO, EFQM and the Joint Commission, projects aimed at improving perceived quality or at introducing patient safety strategies are but some examples of management activities undertaken within the SNS. Also to be mentioned in this section are the re-organisation or creation of new services, such as centres with high resolution capacity, clinical management divisions and units, integration of various levels of care, including social health care, and measures to guarantee system sustainability.

Information and communication technology (ICT) is a vital instrument in clinical and quality management. All of the regional health services have programmes, plans or strategies to implement electronic health records and e-Prescription, centralised appointment services and digital medical imaging projects. Some of them have also undertaken telemedicine projects.

Also present in all autonomous communities is attention to certain processes or the prevention of certain pathologies. This often takes the form of programmes to achieve early detection of breast cancer, neonatal screening, care programmes for oncological

processes and the management of cardiovascular risk. Some autonomous communities devise explicit plans on care for patients with chronic illnesses.

The functional formula common to the regional health services is a pluriannual health plan that lays down the main health objectives. The regional Ministry or Department of Health is responsible for making this plan. The regional health service then lays down the strategy to be used, in accordance with the objectives of the health plan, in documents known variously as strategic plans or steering plans. The lines of strategy set forth in these documents can be grouped into three large blocks: citizens' and patients' rights; clinical and quality management; plans and programmes regarding care for certain diseases and processes.

— Andalucía highlights, among the most relevant aspects of 2009, its new legislation on dying with dignity (*Ley de muerte digna*), the provision of pharmaceutical benefits free of charge to children under the age of one, translation services for health service users who do not speak Spanish, the programme to protect teenagers from cosmetic surgery and the possibility of patients' checking their position on the waiting list in a secure, on-line interface, through the use of digital certificates. Andalucía has included dental care for pregnant women in its pregnancy, childbirth and post-natal programme. It has also consolidated its strategy in clinical and quality management, which is understood to be a whole which includes excellence in technique and knowledge, the development of process management, clinical management, competency-based management and the accreditation and continuous improvement model. Andalucía included 13 more diseases in its preimplantation genetic diagnosis programme. There are also comprehensive plans on the following issues: Alzheimer's disease, palliative care, the promotion of exercise and a balanced diet, diabetes, oncology, rare diseases, mental health and accidents.
— The central theme of the strategy in Aragón is the commitments it has to patients, in terms of waiting periods and services in cases of heart disease, oncology, diabetes, women's health and paediatric care. The lines of strategy in this autonomous community include the regulation of maximum waiting times for consultations and diagnostic procedures in specialised care, and also patients' right to choose their specialist. Another important strategy in Aragón pertains to the rational use of pharmaceuticals, which includes the evaluation of pharmaceuticals, the training of professionals, the incorporation of pharmaceutical care to the care process as a whole, special attention to polymedicated and fragile patients, the extension of electronic prescriptions and clinical management as the foundations of the system. Aragón has put in place strategies for the most relevant health-related issues, such as cancer, stroke, ischaemic heart disease, palliative care, anticoagulant therapy, neonatal screening, normal childbirth and gender violence. Actions aimed at broadening coverage or improving services have been undertaken in all of these strategies.
— In Asturias one of the main lines of strategy is to focus health care services on the needs of citizens, in an effort to make the services more respectful, participatory and capable of speedy response. Actions specified within this strategy include a centralised appointment service, high resolution capacity facilities and the waiting list management system for elective surgical

interventions. In Asturias actions are underway to further quality strategies in all areas, and support structures are being created to measure quality and ensure continuous improvement in this area. Other efforts in quality improvement include progressive ISO certification of services and accreditation of hospitals and primary care teams by the Joint Commission.

— In Baleares the Steering Plan is structured into four large blocks, the first of which is making the patient – and citizens in general – the focal point of the organization. This is to be achieved by incorporating the vision of the health system's users, enabling them to perceive the continuity of the care received, facilitating personalised, human-to-human interactions, and giving them an active role in decision making. These basic concepts take concrete form in the client section of the management contracts. The other large blocks of the Steering Plan are clinical leadership, sustainability and incentivation.

— The strategy in Canarias is to make its system more patient-focused through actions such as providing more financial assistance to patients (and those accompanying them) who must travel to receive care, starting new detection and prevention programmes, and also the culmination of 20 health care infrastructure projects aimed at improving the ease of access, comfort and functionality of the facilities. Particularly significant among the year's positive results is the reduction, for the third consecutive year, of "structural" waiting lists for surgery involving a wait of over six months ("structural" meaning that the wait before surgery takes place is attributable to the organisation and available resources). The quality strategy of the health service in Canarias focuses primarily on ISO certification and the EFQM Excellence Model. This autonomous community highlights its new plan providing dental care to children, a new programme for early diagnosis of heart disease with high risk of sudden death, and the colorectal cancer detection programme. Canarias has also put in place programmes for the detection of hypoacusia in newborns, screening for cystic fibrosis in newborns and also for early detection of amblyopia. Additionally, it has started a project to improve the physical health of patients with severe mental illness.

— One of the priorities of the strategy in place in Cantabria's health service is known as *"People-focused health care,"* which has brought about the creation and consolidation of the User Support Services in the Regional Ministry of Health, as a way to ensure that the health care services meet the needs and expectations of the citizens. Another priority in this region is to improve people's access to the health care system, by improving the performance of existing facilities and by entering into agreements with the private sector to expand services. The health strategy in Cantabria also calls for support for professionals as a key factor in the success of the system, investment in infrastructure, continuous improvement in health care organization and services, and the development of health research. Measures taken as part of the strategy include the strategic plan on training, the start-up of new health centres and accreditation of the Marqués de Valdecilla Institute of Health Training and Research as an institute attached to Carlos III Health Institute. Cantabria continues with its Women's Health Plan, which works towards the prevention of cervical cancer, through vaccination programmes; the promotion of normal childbirth and the consolidation of the plan for early detection of breast cancer. In 2009 the programme for early detection of

colorectal cancer was gradually extended. In this autonomous community actions in the area of palliative care have extended to all health areas. The primary care team plays the leading role in such care, which complies with the strategy approved by the CISNS. The children's dental health plan began in 2008 and is being implemented gradually by age group, year by year. The 2009 phase of implementation was completed satisfactorily.

— In Castilla-La Mancha at the end of 2008 policies in the areas of health and social welfare were merged and a new regional ministry was created. This coincided with the commencement of the Health and Social Welfare Plan, which is based on the real integration of the networks offering social care and health care resources, so as to better respond to the challenges of a society that is growing older, has more chronic illnesses and new health care needs. In relation to the rights of citizens, the Social Health Foundation for the Integration of the Mentally Ill has published the rights and duties of the mentally ill and has determined the quality standards that must govern the functioning of mental health care services. Castilla-La Mancha makes special mention of the improvement in the resolution capacity of its primary care services; of efficient, quality prescribing, with emphasis on prescription by active ingredient; and of the strategic plans on patient safety, perceived quality and the importance of small details in this area. Castilla-La Mancha also highlights the activities carried out in relation to cancer, drug abuse, mental health, diabetes, AIDS and rare diseases. Services for cancer patients have been reinforced and improved, as has the programme for early detection of breast cancer. Within the framework of the Regional Plan to combat alcoholism and drug dependence, work in the area of prevention has continued, in collaboration with local governments, schools and primary care doctors. Additional effort was devoted to actions and strategies already in place. Significant activities in the autonomous community of Castilla y León, in the framework of the Third Plan on Health and Regional Strategies (infrastructure, on-going training, response to the flu epidemic, research and ICT), include actions related to the expansion of the benefits package, the new Río Hortega University Hospital in Valladolid, the actions aimed at offering more complete care services in oncology and the reinforcement of paediatric care through new intensive care services (in León) and paediatric surgery (in Valladolid). Castilla y León has also promoted the improvement and expansion of the benefits package in primary care, the achievement of higher resolution capacity at this care level, and new primary care facilities. As mentioned above, Castilla y León has broadened and improved its oncological care services by incorporating the speciality of medical oncology into the services offered by the hospitals in Aranda de Duero and Miranda de Ebro, with the creation of oncological day hospital in both facilities and adaptation of the pharmaceutical services accordingly. It has also worked in the area of prevention and public health, with programmes on familial hypercholesterolemia, early detection of colorectal cancer, vaccination against human papillomavirus (HPV) and the detection of circulating HPV.

— The strategy followed in Cataluña is set forth in the Health Plan; the Map of Health Care, Social Health Care and Public Health; steering plans and strategic plans for the organisation of services. Steering plans are intended to make the policies set by the Health Plan operative. There are steering plans

on oncology, social health care, mental health and addictions, the circulatory system, immigration, rheumatic diseases and the locomotive system. The steering plan on oncology focuses on early detection (breast, colorectal, cervical), speedy diagnosis, multidisciplinary spaces and the cancer registry of Cataluña. In relation to diseases of the circulatory system, codes on heart disease and stroke have been developed. In 2009 the steering plan on diseases of the respiratory system was implemented, thus fulfilling one of the aims set forth in the Health Plan. In contrast, the strategic plans for the organisation of services define the model used to organise the services offered in Cataluña. They deal with the organisation of paediatric primary care; care for kidney patients; specialised outpatient care; maternal and child care; and sexual and reproductive health. Special mention must go to the Primary Care and Community Health Innovation Plan, the aims of which include service improvement, integrated care and working in partnership, among others.

— The general principles established by the Regional Ministry of Health and Dependence of Extremadura focus on three overarching strategies, the first being that region's prevalent and emerging health problems: cardiovascular disease, cancer, mental health, drug dependence and other addictive behaviours, accidents and violence, chronic respiratory diseases, endocrine-metabolic diseases, infectious diseases, rare diseases and zoonoses. This strategy, along with the protection and improvement of the health of the citizenry and continuous improvements in quality, are the basis of the Strategic Plan of the Regional Health Service of Extremadura. This Plan defines the objectives of the management contract between the management structures of the Regional Health Service and those of the health areas throughout the autonomous community. It sets the following five institutional objectives: an organisation focused on improving citizen health and satisfaction; greater professional involvement; enhanced efficiency of the organisation; improved resource management through innovation and integration; and allocation of resources to total quality, through actions such as the introduction of process management and a global patient safety strategy.
— The four global strategies in Galicia include promoting the exercise of the rights provided for in health legislation and providing the health services needed by the population in a timely and appropriate manner. These objectives take specific form in actions called for by the strategic plan in relation to the accessibility, equity and quality of the services provided. The current strategic plan in Galicia began functioning in 2009 and that same year some actions were initiated, such as the promotion of safety in care processes, the monitoring of care processes and the co-ordination between care levels, for which specific structures were created. Especially important among the programmes in operation is the rationalization of the pharmaceutical expenditure. The Strategic Plan of the Health Service of Galicia calls for the creation of expedited pathways for cancer patients and care-related programmes in specific areas, intended to improve care provided to cancer patients and emergency medicine.
— The most relevant landmark in Rioja was the approval of the Second Health Plan of Rioja, the principles of which include reducing inequality in health. It foresees interventions on specific groups and in the area of ageing and

vulnerable groups. The Health Service of Rioja highlighted four lines of work in 2009: promotion and development of technologies to improve accessibility, the extension of the benefits basket, the development and improvement of care processes other than hospital admission and collaboration with Rioja Health Foundation for health research. The Rioja Health Plan has set the objective of reducing avoidable mortality and morbidity. To do so it calls for clinical and social health interventions targeting transmissible diseases, cancer, diabetes and obesity, among other pathologies.

— The strategic priorities of Madrid's Regional Ministry of Health focus on giving individuals a greater role in their health care, furthering the capacity of free choice. Contributing to this objective are the creation of a single health area for the entire community and giving patients the right to choose their family doctor, paediatrician and nurse in primary care and their specialist and hospital in specialised care. The right to choose professionals does not apply to home care and urgent care services. The strategy of Madrid in clinical and quality management is based on the promotion of mechanisms of free choice, in pursuit of excellence in public sector health care through quality, proximity, accessibility and equal opportunities.

— In 2009 the Region of Murcia passed the Law on the Rights and Duties of Murcia Residents and the Health Plan 2010-2015. This autonomous community connects these two events by giving priority to patients' rights and duties in all of the strategies included in the Health Plan. The strategies focus on the rational use of pharmaceuticals and pharmaceutical culture: knowledge management, prescribing infrastructures, better and safer use of pharmaceuticals and co-operation with professionals.

— In the Strategic Plan of the Health System of Navarra, one of the lines of work is devoted to “Society and Citizens.” One priority in this autonomous community is the reduction of waiting lists, which brings considerable improvements to both specialist consultations and surgery. Navarra focuses on the integration of specialised care services, consolidation of home hospital care, debureaucratization in primary care and the quality plan for this level of care. Navarra, in addition to continuing with programmes such as those devoted to early detection of breast cancer or the prevention of cardiovascular risk, paid special attention to the promotion of home hospital care in 2009.

— The programmatic principles of the health care system in País Vasco revolve around making people the main objective of the system, guaranteeing respect for their personality, privacy, capacity to choose and equal access to the health services. They also include citizen evaluation, both of plans and objectives and also of their results. The strategy of this autonomous community's Health Service is put into effect through 14 projects, which include unified electronic health records (Osabide Global) and integrated health care. The objective of the latter is to explore, through pilot experiences, new ways for health care providers to work and organise their activities, integrating the two levels of care. In País Vasco the strategy for responding to the needs of patients with chronic diseases identifies six key elements for ensuring that care for these individuals is optimal: suitable organisation of health care system, closer relationships with the community, promotion of and support for self-care, design of the care provision model,

decision-making support mechanisms and the development of clinical information systems. The measures include developing a care model for chronic patients that creates an intermediate level between primary care and specialised care, specific to this kind of patient.

— The Strategic Plan of Comunidad Valenciana calls for the improvement of health outcomes, an important element of which is the provision of health care services that respond to the population's expectations. The second of the elements is empowering patients by personalising the attention they receive. Comunidad Valenciana uses the management tool of differentiated remuneration. In this context, self-management schemes for primary care professionals are intended to reward efficient clinical management by allowing professionals to partake of the savings generated. Two of the four innovative elements of this autonomous community's Strategic Plan are chronic patient management and home hospital care, supported by information and communication technology (ICT).

— INGESA's overall objective is to guarantee that the health care services available in the North African cities of Ceuta and Melilla are comparable to those available in the rest of Spain, guaranteeing and improving accessibility, quality and sufficiency. INGESA is working to achieve excellence in health care, with more personalised attention that focuses on the particular needs of the patient. The characteristics of the health care system in these two cities mean that INGESA must adapt the planning of resources to the real population requiring them, which is considerably higher than that suggested by the reference figures appearing in the health card database. It is also necessary to adapt to the cultural diversity present in the two cities, through specific information mechanisms and the use of cultural mediators. The INGESA strategy is based on the adaptation of the Quality Plan for the SNS. In 2009, with funding from the Cohesion Fund, actions were carried out in the areas of patient safety, cancer, ischaemic heart disease, diabetes, palliative care, perinatal care and gender. Other programmes were related to dental care for children, COPD, stroke and mental health.

2.2 Management formulas in the SNS

As mentioned earlier, the common pattern in the functioning of the regional health services is a pluriannual health plan laying down each region's primary objectives. The regional health service determines the strategy to be used, in accordance with the objectives of the health plan, in documents known variously as strategic plans or steering plans. Annually or pluriannually all of these plans are put into practical form in the management plans, contract-programmes, management contracts or agreements. All of these names refer to the system used by the autonomous communities to specify the year's objectives, the budget, the priorities established, the mechanisms with which to evaluate fulfilment and the incentive programme, if any. Generally speaking, contract-programmes are used throughout primary care but more unevenly in specialised care.

Although the autonomous communities all have peculiarities in their contract-programmes or plans, it is possible to identify some common elements that give an idea of how strategies take concrete form in the annual management of primary and

specialised care facilities in the SNS. To prepare this review, the following elements were identified as features that define the contract-programmes: how commitments are undertaken, that is, what bodies are involved in the yearly management plan; what the key areas and lines of activity are; how the budget is assigned; what evaluation and incentive programmes are like; whether certain key objectives are linked to incentives; and if evaluation results have repercussions on the career path of the professionals.

The commitments are almost always between the regional ministry of health and the management structures of the regional health service. The regional health service in turn enters into contracts with the management bodies of primary and specialised care areas, depending on the configuration of the structures in that autonomous community. Such contracts are also signed with public foundations and companies, if they play a role. However, there are some variations that warrant special note, such as the type of agreement used in Aragón. Here the contract is signed by all the directorates or units of the regional ministry of health plus the management body of the regional health service, as well as the management bodies of each of the various health sectors into which Aragón is divided. In Cataluña, the Servei Catalá de la Salut (CatSalut) defines the way in which services are to be provided and how Health Plan objectives are to be put into practice, and Cat Salut is also the body that enters into agreements, with individual clauses for each of the providers. In this autonomous community the care provision model is based on networks of care providers that do not belong exclusively to the administration. Various autonomous communities (Cantabria, Madrid and Murcia, among others) consider the EFQM Excellence Model to be very important for aligning the objectives of the health facilities with those of the organisation.

When looking at the key areas and lines of work in the contract-programmes, it is evident that certain elements appear in almost all of the autonomous communities, such as: financial matters; clinical management; accessibility; care continuity; the co-operation, co-ordination and integration between care levels; perceived quality and a client-focused approach; and the introduction of information systems.

— Financial matters may include various aspects of economic management, such as budget compliance and aims in terms of efficiency and sustainability. In general, the objectives mentioned in this area refer to efficiency in the provision of services and in budget compliance. This type of objective is present in all autonomous communities, although their denomination and definition vary.
— Most autonomous communities expressly mention objectives that can be classified in the category of clinical management. Besides the objectives appearing expressly with this denomination, others that can be included in this section are those pertaining to the development and expansion of the benefits package and to resolution capacity at the different care levels. Rational pharmaceutical use is a line of strategy that appears in almost all the contract-programmes. The Special Programme for Quality in Clinical Practice and Pharmaceutical Benefits of Castilla y León, underway since 2006 in primary care, focuses on two fundamental aspects: improvement in the quality of care received by the patient, focusing on the quality of the health records and on the appropriate and rational use of pharmaceuticals. In other autonomous communities, priority is given to care continuity, co-operation, integration or co-ordination between care levels. These issues are mentioned

expressly by Canarias, Rioja, Galicia and Navarra. Also very common are objectives related to quality improvement and accreditation.

— Services that are patient-oriented, or citizen-oriented, and are thus specifically designed to meet the needs and obtain the satisfaction of the patients, also appear frequently in contract-programmes. The control of waiting times before care is received appears in both care levels, but logically it is addressed more explicitly in contracts regarding specialised care.

Once the objectives and priorities have been defined, a key aspect in the contract-programmes is the assignment of resources with which to meet them. Much discussion has been devoted to how budgetary resources should be assigned, in both primary care and specialised care. These discussions address the possibility of using criteria other than expenditure in previous years (the "historic budget"), and in the event of doing so, which criteria should be used to correct the "historic budget" and how to ensure a fair allocation of resources.

Table 2.2 shows how budget is assigned in the different autonomous communities. In most of them the historic component is of undeniable importance, although the tendency is to bring other factors into the budget assignment procedure. In Andalucía the historic expenditure is adjusted by the population component in the case of primary care and by patient complexity in specialised care. This is also the case in other communities, such as Aragón. INGESA takes into account the results of the activity, in terms of quality and budget. Comunidad Valenciana assigns its resources based on the population (capitation funding). Determining which indicators should be used in a contract-programme is not a neutral decision. Regardless of the statements made concerning what the priority or key areas are, the true priorities are set when the indicators and their evaluation mechanism are selected.

Logically enough, contract-programmes measure activity and expenditure in addition to the fulfilment of the objectives. A higher degree of refinement would involve measuring the impact of the results of management on the fulfilment of the objectives set out in the health plans. Indicators of budgetary compliance and indicators of expenditure are included in all the contract-programmes. The coverage of the various programmes or plans on specific pathologies and also the consolidation and coverage of the benefits package are also measured in all management plans. Other indicators used pertain to patient referral from primary care to specialised care and some autonomous communities also include indicators related to temporary incapacity. Perceived quality indicators (for example, the number of complaints filed) as well as indicators of scientific production and patient safety are also present in some contract-programmes.

There is near unanimity in making use of a battery of indicators related to the rational use of pharmaceuticals (prescription by active ingredient, expenditure indicators, pharmaceutical prescribing profiles) and to waiting times in primary and specialised care. The control of waiting lists for surgery, for special explorations and for specialist consultation is present in all health services. In some cases these controls focus heavily on compliance with the regulations concerning maximum waiting times.

Table 2.3 contains a synthesis of how the attainment of objectives is evaluated in the various regional health services and the use, if any, of incentives to motivate professionals.

Table 2.2 Methods of budget assignment.

	Primary Care	Specialised Care	Management of Health Area
Andalucía	Combined. Historic budget adjusted according to compliance in previous year, per capita expenditure adjusted by demographic structure and dispersion	Combined. Historic budget adjusted according to compliance in previous year, per capita expenditure adjusted by complexity	
Aragón			For structure maintenance, by fee for process: DRG and ACG systems, patient complexity in mental health and chronic patients. Also by historic expenditure and percentage of subsidy granted to cover operational costs
Asturias	Historic budget	Historic budget	Historic budget
Baleares	Historic budget with corrections	Budget assigned according to activity in each service	Budget assigned according to activity in each service + historic budget with corrections
Canarias			Consolidated expenditure plus previsions for new actions
Cantabria	Budget assignment by chapters based on historic budget	Budget assignment by chapters based on historic budget	
Castilla y León			Per capita, as set forth in SAN Order 2395/2009 of 28 December following collective bargaining (fixed and variable productivity). Incentives to participate in Special Programmes of the regional health management structure (SAN Order 2394/2009 December, 28th)
Castilla-La Mancha	Historic budget with corrections and adjustments	Historic budget with corrections and adjustments	Historic budget with corrections and adjustments
Cataluña			Individual allocation to each of the providers. Variable part linked to objectives common to all providers (50% of the variable amount) and another linked to specific objectives of the health regions.
Comunidad Valenciana			Capitation funding
Extremadura			Historic budget adjusted by population and objectives
Galicia	Historic budget adjusted by annual plan	Historic budget adjusted by annual plan	Historic budget adjusted by annual plan
Madrid	Foreseeable absences and number of professionals per category. Pharmacy: capitation (20% of the budget) + historic (80%) adjusted by savings expected according to objectives	Budget assigned per activity adjusted by historic budget	
Murcia			Per capita with corrections
Navarra	Per capita with corrections	Historic budget	
País Vasco	Per capita with corrections Some services (teaching, customer attention) according to costs	According to the weights of the DRGs attended. According to prices in some units (dialysis, rehabilitation)	
Rioja	Historic budget	Historic budget	
INGESA (Ceuta and Melilla)			Historic budget modified after evaluation of results in activity-related to objectives, quality and budget

Source: Information provided by the autonomous communities for this report.

With the exception of some autonomous communities, such as Murcia, productivity bonuses are present throughout primary care, but they are found somewhat more unevenly in hospitals. In País Vasco incentives are not offered to individuals but rather to groups, in the form of training programmes, resource allocation and flexibility in work organization.

Table 2.3 Evaluation and incentives of management plans (contract programmes, management contracts, goal-based agreements).

	Evaluation	Incentives
Andalucía	Evaluation of professionals, PC teams, SC hospital services and centres	Productivity bonus, income supplement for professional performance. Productivity bonus for centres, services and the professionals.
Aragón	Evaluation of health sectors and centres. Each manager evaluates his/her units	Productivity bonus based on combined method (individual and teams)
Asturias	Monitoring commission. Evaluation of management	Incentives only for CMU and PCT. In CMU they are individual, but based on performance of the entire PCT
Baleares	Evaluation of individuals and teams in PC. In SC evaluation of individuals occurs in some services	Productivity bonus for individuals and groups
Canarias	Evaluation based on centralised registers and satisfaction surveys. Evaluation of services, units and management.	Productivity bonus for services or units in SC. In PC they are individual.
Cantabria	Self-evaluation, external evaluation, centralised registers, reciprocal revision, evaluation of PCTs, Evaluation of individuals in rational pharmaceutical use in PC and of services in SC.	Productivity bonus for services or teams, and for individuals
Castilla y León	External evaluation from central services. Evaluation of teams or services, individuals in cases in which indicators allow it	Incentives are individual.
Castilla-La Mancha	Self-evaluation, external evaluation, centralised registers. In PC evaluation is of individuals. In specialised care it is of services.	Productivity bonus is individual
Cataluña	Contract objectives evaluated from the perspective of the service purchase process.	The contracts provide for variable remuneration depending on specific objectives and evolution in recent years
Comunidad Valenciana	Evaluation based on information systems and expert committees. Multilevel evaluation from individual level to management level.	Productivity bonus for individuals, modulated by team and centre results
Extremadura	Centralised registers and reciprocal revision. Evaluation of individuals and teams	Productivity bonus for teams. In some cases it is individual
Galicia	Self-evaluation, centralised registers. Individuals, teams and centres are evaluated.	Productivity bonus for individuals, teams and centres
Madrid	In PC evaluation is based on centralised registers and information provided by management and health centres. In SC evaluation is based on centralised registers and monitoring meetings. Evaluation of health centres, services and hospitals.	Productivity bonus for PCT and individuals. In the case of hospitals each hospital chooses to pay bonus to individuals or to services.
Murcia	Self-evaluation, centralised registers, external evaluation. For all segments from health area to clinical unit	Productivity bonus for managers, not for other workers.
Navarra	In primary care it is based on centralised registers. Evaluation of PCT. In specialised care evaluation is of services.	Productivity bonus for PCTs. No productivity compensation in specialised care.
País Vasco	Evaluation by experts from the provinces. The general criteria are decided by mixed evaluation commissions. Evaluation uses combined method (centralised and self-evaluation)	Compensation bonus exists but is for teams not individuals. It takes the form of training programmes, resource allocation and flexibility in work organisation
Rioja	Evaluation based on centralised registries	Productivity bonus in primary and specialised care.
INGESA (Ceuta and Melilla)	Monthly registries from areas, centralised balanced scorecard, annual evaluation by INGESA's central services. Evaluation is of areas as a whole and also of services	Productivity bonus for teams, except in the case of rational use of pharmaceuticals, which is individual.

Notes: PC: primary care. SC: specialised care. CMU: clinical management units. PCT: primary care teams.
Source: Information provided by the autonomous communities for this report.

Also of interest is seeing whether there are objectives that, if not reached, prevent or make it more difficult to receive bonuses even when the overall evaluation is positive. This is the case in Baleares, Castilla-La Mancha and in primary care in Navarra. In five

of the 18 regional health services, reaching or not reaching the objectives set forth in the contract-programme has no repercussions on the professionals, although in one of them (Castilla y León) some indicators are shared.

Table 2.4 Key objectives for productivity and evaluation's repercussions on professionals.

	KEY OBJECTIVES (NON-FULFILMENT MEANS NO PRODUCTIVITY BONUS)	EVALUATION'S IMPACT ON CAREER PATH OF THE PROFESSIONAL
Andalucía	NO	YES
Aragón	NO	YES
Asturias	NO	YES
Baleares	YES	NO
Canarias	NO	YES
Cantabria	NO	YES
Castilla y León	NO	NO although the plan shares training indicators with career path system
Castilla-La Mancha	YES	YES
Cataluña		
Comunidad Valenciana	NO	YES
Extremadura	NO	NO
Galicia	NO	YES
Madrid	NO	NO
Murcia	NO	NO
Navarra	YES in PC	YES
País Vasco	NO	NO
Rioja	NO	YES
INGESA (Ceuta and Melilla)	NO	YES

Source: Information provided by the autonomous communities for this report.

Other management formulas

The provision of health services by entities such as foundations, concessions and public enterprises, among others, is relatively frequent in the SNS. Although long-term agreements with private bodies are also frequent, here the main characteristics of agreements with public entities are examined.

According to the information furnished by the autonomous communities for the preparation of this report, in the case of public enterprises, consortia and foundations, budget allocation has a historic component, but other methods are more common, such as capitation and service purchases or activity-based budgeting. In the case of government concessions, hospital construction fees and operation fees are usually added to the per capita budget.

It is quite infrequent for there to be real risk transfer, that is, the public entities do not absorb losses. In most cases compensation formulas are established. In the case of government concessions such real risk transfer does occur, although with exceptions, as in the case of extraordinary expenses such as those caused by the Influenza A pandemic. In all cases there are formulas with which to review prices and budgets according to the results of the evaluation provided for in all contracts.

The other features (objectives, indicators, evaluation, etc.) of the contract-programmes or long-term agreements with the aforementioned bodies do not differ greatly from those found in facilities managed directly.

2.3 Health care expenditure

Expenditure as a measure of the resources applied to the health care system is one of the most widely-used ways of putting the economic dimensions of health care into figures. It is also a key indicator of the evolution and structure of a sector that is under continuous pressure, not only because of the ageing of the population but also as a result of the major advances taking place in science and technology.

As shown in Table 2.5, the total expenditure of the health care system in Spain, understood as the sum of private and public care resources, was €97,614 million in 2008.[3] This represents 9.0% of the gross domestic product (GDP). Of this share, 6.5% was financed with public resources and 2.5% with private resources.

Table 2.5 Health expenditure and gross domestic product (GDP). Spain, 2004-2008.

	2004	2005	2006	2007	2008
Total health expenditure	68,890	75,289	82,250	88,914	97,614
Public expenditure on health	48,603	53,145	58,652	63,854	70,799
Private expenditure on health	20,287	22,144	23,598	25,060	26,815
GDP	841,042	908,792	984,284	1,052,730	1,088,502
Notes	Figures in millions of Euros				
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. System of Health Accounts. National Statistics Institute. National Accounts of Spain.				

During the 2004-2008 period health expenditure experienced an average annual growth of 9.1%. The public expenditure increased by 9.9% annually, while private expenditure showed less intense growth, with an annual average of 7.2%. During the same period GDP growth, in terms of annual averages, was 6.7% lower than the growth in both total and public expenditure on health, which means that the share of these figures in the GDP has experienced forward movement calculated at 0.8 and 0.7 percentage points respectively.

In the five year period analysed, the share of public expenditure on health within the total expenditure on health has increased, moving from 70.6% in 2004 to 72.5% in 2008, as shown in Figure 2.1.

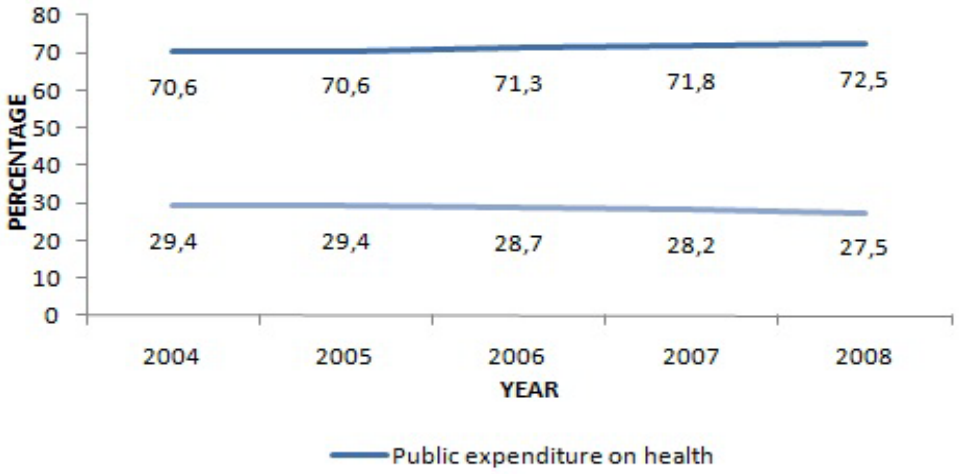
Table 2.6 shows the weight that the different actors and financing agents have in the health care system. In the public sector autonomous communities are responsible for 91.0% of the total expenditure, which means that their rate of growth marks the system's overall evolution. Their average annual growth rate in the period 2004-2008 was 9.8%. The various non-regional agents (central government, the Social Security system and insurance mutuals for civil servants) represent 7.2% of the expenditure, although the behaviour of this set of agents has been somewhat uneven during this five year period, probably due to the implementation of specific financing measures at different times.

[3] The estimated expenditure has been calculated by the Sub-Directorate General of Economic Analysis and the Cohesion Fund of the Ministry of Health and Social Policy (MSPS), in accordance with the methodology established in the OECD's System of Health Accounts (SHA), and are the figures published by this organisation in its annual report, Eco-Health, along with the joint questionnaire by Eurostat, OECD and WHO.

It must be pointed out that the SHA incorporates in the long-term care function not only strictly health-related care for dependent persons, but also what is known as the personal care needed to carry out basic activities of daily life. This nuance differentiates the methodology used in the Public Expenditure on Health Statistical Report of the MSPS from the OECD's System of Health Accounts. The expenditures in long-term care are undoubtedly the differential element between the two series that has the greatest impact on results.

With regard to private expenditure on health, it is households that bear the greatest burden, with a share of 75.5%. However, the most dynamic sector during the period analysed was that of private insurance companies, which went from financing 19.3% of the total private expenditure in 2004 to 20.3% in 2008. This growth is largely the result of the increasing number of employer-paid group policies.

Figure 2.1 Public expenditure on health and private expenditure on health. Spain, 2004-2008.



Notes	Each expressed as a percentage of the total health expenditure.
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. System of Health Accounts.

Table 2.7 shows the composition of expenditure by the health service providers within each of the two large financing sectors, the public sector and the private sector, based on the expenditure estimates made in keeping with the classifications and boundaries of the System of Health Accounts.[4]

[4] See footnote 1.

Table 2.6 Health care expenditure. Distribution by financing agent. Spain, 2008.

PUBLIC EXPENDITURE ON HEALTH	72.5%	
CENTRAL GOVERNMENT		1.40%
Ministry of Health and Social Policy		0.33%
Ministry of Science and Innovation		0.56%
Ministry of Labour		0.28%
Ministry of Home Affairs		0.18%
Other ministries		0.05%
SOCIAL SECURITY		2.88%
National Institute of Health Management		0.39%
Social Institute of the Merchant Navy (ISM)		0.04%
Industrial Accident Mutuals		2.45%
MUTUALS FOR CIVIL SERVANTS		2.96%
Social Institute of the Armed Forces (ISFAS)		0.91%
General Mutual Fund for Civil Servants (MUFACE)		1.93%
General Mutual Fund for Justice Department Civil Servants (MUGEJU)		0.11%
AUTONOMOUS COMMUNITIES		90.96%
CITIES WITH STATUTE OF AUTONOMY		0.02%
LOCAL GOVERNMENTS		1.79%
PRIVATE EXPENDITURE ON HEALTH	27.5%	
Direct out of pocket payment		75.51%
Non-profit institutions serving households		2.51%
Private insurance		20.33%
Societies (except medical insurance)		1.65%

Source MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.
MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. System of Health Accounts.

Table 2.7 Current expenditure on health. Distribution by providers and financing agents. Spain, 2008.

	HF.1 Public administrations	HF.2 Private sector	Total current expenditure
HP.1 - Hospitals	51.9	8.6	39.8
HP.2 - Nursing and residential care facilities	4.9	6.5	5.3
HP.3 - Ambulatory care providers	20.5	50.1	28.8
HP.4 - Providers of medical products	19.0	28.0	21.5
HP.5 - Provision and admin. of programmes on public health	1.2	0.4	1.0
HP.6 - General health administration and insurance	2.1	6.4	3.3
HP.7 - Other industries	0.4	0.0	0.3
HP.9 - Rest of the world	0.0	0.0	0.0
Total expenditure	**100.0**	**100.0**	**100.0**

Notes Percentage of each provider in the total expenditure of financing agents.
The International Classification for Health Accounts (ICHA) specifies three dimensions: ICHA-HC, health care by function; ICHA-HP, health care service providers; ICHA-HF, health care financing agents

Source MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. System of Health Accounts.

In the public sector the expenditure on hospitals is 2.5 times the expenditure on ambulatory care providers, while in the private sector the relationship is the opposite, with private expenditure on hospitals being just one fifth of that going to ambulatory services. Nonetheless, to accurately assess the weight of private hospitals in the system, it must be noted that 66.8% of the health care services provided in private hospitals are being financed by the public sector through long-term contracts.

With regard to ambulatory care providers, a distinguishing feature between the two financing schemes must be pointed out; in the public sector it is primary care that predominates, based on the SNS health centres, while in the private sector it is dental and specialised consultations that generate 78.6% of the total expenditure going towards ambulatory care providers.

To analyse expenditure from the financial/budgetary perspective and taking into account the health care functions to which the expenditure responds, as well as its distribution among autonomous communities, the use of the Public Expenditure on Health Statistical Report[5] has been deemed more appropriate. Therefore, as mentioned above,[6] long-term care costs are not considered, as they do not fall within the range of health services provided by the autonomous communities.

Table 2.8 breaks down public sector health expenditure according to its functional classification.

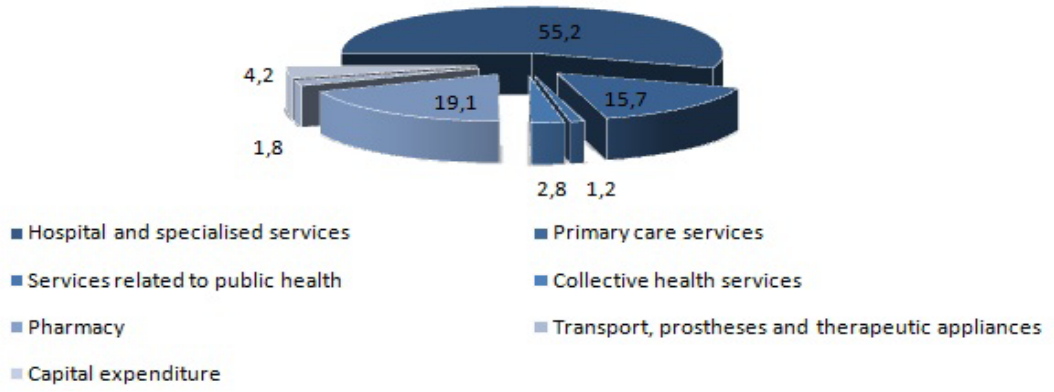
Table 2.8 Public expenditure on health. Functional classification. Spain, 2004-2008.

	2004	2005	2006	2007 (*)	2008 (*)
Hospital and specialised services	24,577	27,004	30,034	32,497	36,778
Primary health care services	7,149	7,824	8,442	9,453	10,450
Services related to public health	572	631	752	835	794
Collective health services	1,320	1,487	1,644	1,839	1,872
Pharmaceuticals	10,153	10,758	11,301	11,902	12,721
Transport, prostheses and therapeutic appliances	768	799	971	1,075	1,221
Capital expenditure	1,810	2,084	2,539	2,621	2,823
CONSOLIDATED TOTAL	**46,349**	**50,587**	**55,683**	**60,222**	**66,658**
Notes	Figures in millions of Euros. (*) Provisional figures.				
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.				

The function with the most weight within public sector health care is that of hospitals and specialised services, which in 2008 reached 55.2% of the total consolidated expenditure. Next in importance comes expenditure on pharmaceuticals, with 19.1%, and then primary care, with 15.7% of the total, as shown in Figure 2.2.

[5] Ministry of Health and Social Policy. *Estadística Gasto Sanitario Público (EGSP).*
[6] See footnote 1.

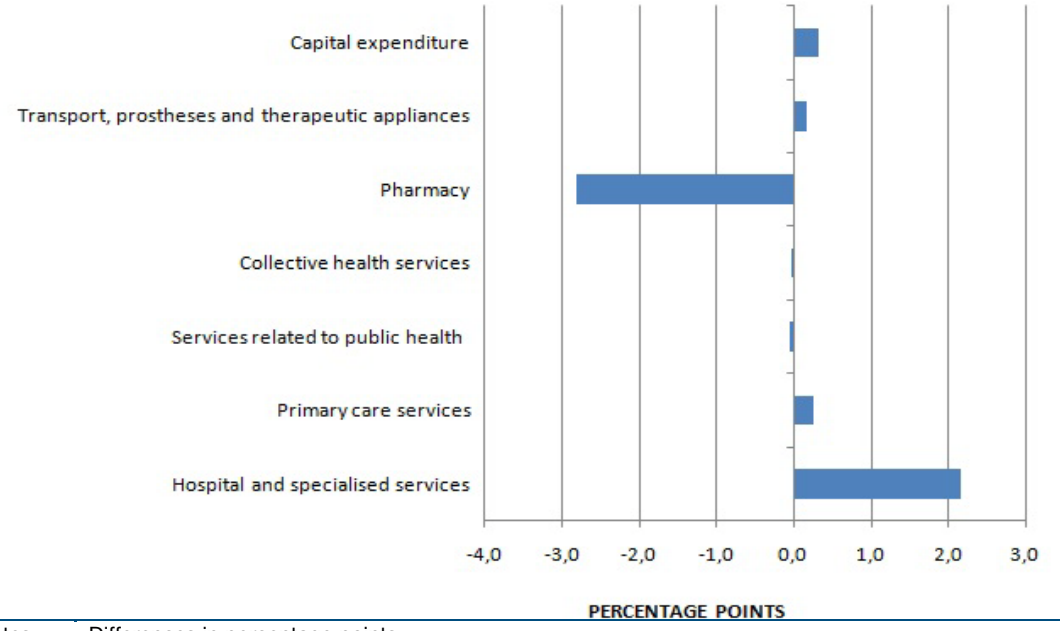
Figure 2.2 **Public expenditure on health. Functional classification. Spain, 2008.**



Notes	Percentage distribution
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

As Figure 2.3 reveals, these health care functions (which represent 89.9% of the total expenditure) show uneven behaviour during the 2004-2008 period. Hospital and specialised services are the most dynamic, with a 2.1% increase, and they move from 53.0% to 55.2% of the total expenditure. In contrast, expenditure on pharmaceuticals moves in the opposite direction and falls 2.8%, which puts this expenditure at 19.1% of the total. Primary health care services represent 15.7% of expenditure in 2008, having slightly increased their share in the total.

Figure 2.3 **Public expenditure on health. Functional classification. Variation from 2004 to 2008.**



Notes	Differences in percentage points.
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

Table 2.9 breaks down public sector health expenditure according to its economic classification. It shows that remuneration of personnel absorbs the greatest percentage of the total expenditure. In 2008 this kind of expenditure came to a total of €29,038 million.

Table 2.9 Public expenditure on health. Economic classification. Spain, 2004-2008.

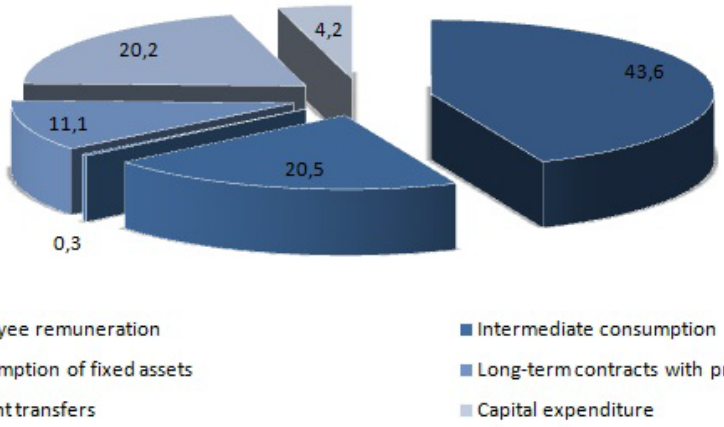
	2004	20 5	-{}-2006	2007 (*)	2008 (*)
Remuner tion of personnel	19 369	20,832	23,189	26,136	29,038
Intermediate consumption	8,697	9,791	11,385	11,807	1 ,693
Consumption of fixed assets	118	373	174	197	224
Long-term contracts	5,643	6,068	6,389	6,799	7,383
Current transfers	10,711	11,439	12,008	12,663	13,497
Capital expenditure	1,810	2,084	2,539	2,621	2,823
CONSOLIDATED TOTAL	**46,349**	**50,587**	**55,683**	**60,222**	**66,658**

Notes: Figures in millions of Euros.
(*) Provisional figures.

Source: MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

In 2008, 43.6% of the public expenditure on health went to employee remuneration. Next in importance was intermediate consumption at 20.5%, current transfers at 20.2%, and purchases from the private sector through long-term contracts, which represent 11.1% of expenditure in the sector, as shown in Figure 2.4.

Figure 2.4 Public expenditure on health. Economic classification. Spain, 2008.



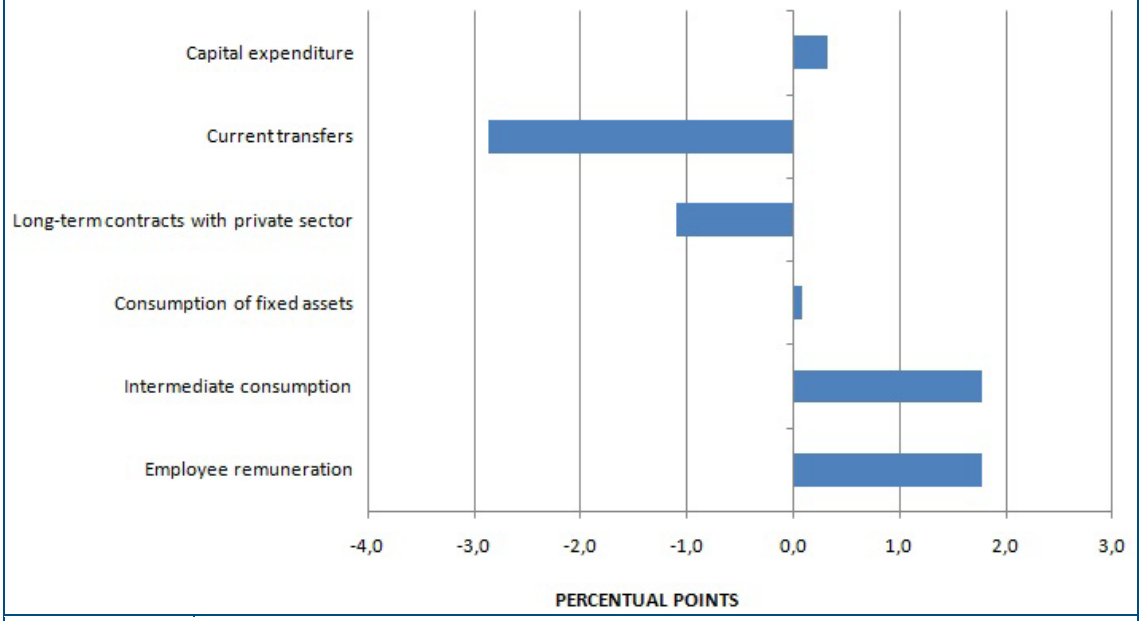
Notes: Percentage distribution.

Source: MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

Setting aside the behaviour of capital expenditures, both on consumables (because they are difficult to estimate) and on investment capital (because they are highly seasonal and variable), an analysis of expenditures in the 2004-2008 period reveals that intermediate consumption expenditure has shown the greatest growth during the five year period, at a rate of 12.0%, followed by the expenditures on employee remuneration, at 10.7% and long-term contracts with private entities, at 6.9%. As a consequence of these different rates of growth, expenditures in both intermediate consumption and employee remuneration have seen their weight in the total expenditure increase by 1.8%, mainly at

the expense of current transfers, which have fallen 2.9%, and long-term contract costs, which have fallen 1.1%.

Figure 2.5 **Public expenditure on health. Economic classification. Variation from 2004 to 2008.**



Notes	Differences in percentage points
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

Table 2.10 presents the consolidated health care expenditure of the autonomous communities in the 2004-2008 period and also the average rates of growth during this period, as published in the Public Expenditure on Health Statistical Report.

Table 2.10 **Public expenditure on health by autonomous community. Spain, 2004-2008.**

	2004	2005	2006	2007	2008	AAGR
Andalucía	7,026	7,539	8,339	8,868	10,307	10.1
Aragón	1,368	1,441	1,589	1,739	1,898	8.5
Asturias	1,179	1,254	1,339	1,423	1,550	7.1
Baleares	874	1,064	1,078	1,210	1,312	10.7
Canarias	1,897	2,148	2,318	2,509	2,854	10.8
Cantabria	661	718	766	825	773	4.0
Castilla y León	2,533	2,753	3,164	3,073	3,621	9.3
Castilla-La Mancha	1,614	2,073	2,355	2,426	2,541	12.0
Cataluña	6,556	7,140	8,071	8,967	9,872	10.8
Comunidad Valenciana	4,242	4,718	5,120	5,590	6,137	9.7
Extremadura	1,134	1,223	1,349	1,526	1,659	10.0
Galicia	2,827	2,931	3,231	3,453	3,805	7.7
Madrid	5,266	5,687	6,140	6,778	7,444	9.0
Murcia	1,284	1,426	1,567	1,756	2,132	13.5
Navarra	662	694	753	827	916	8.5
País Vasco	2,309	2,530	2,703	3,018	3,337	9.6
Rioja	311	354	456	556	470	10.9

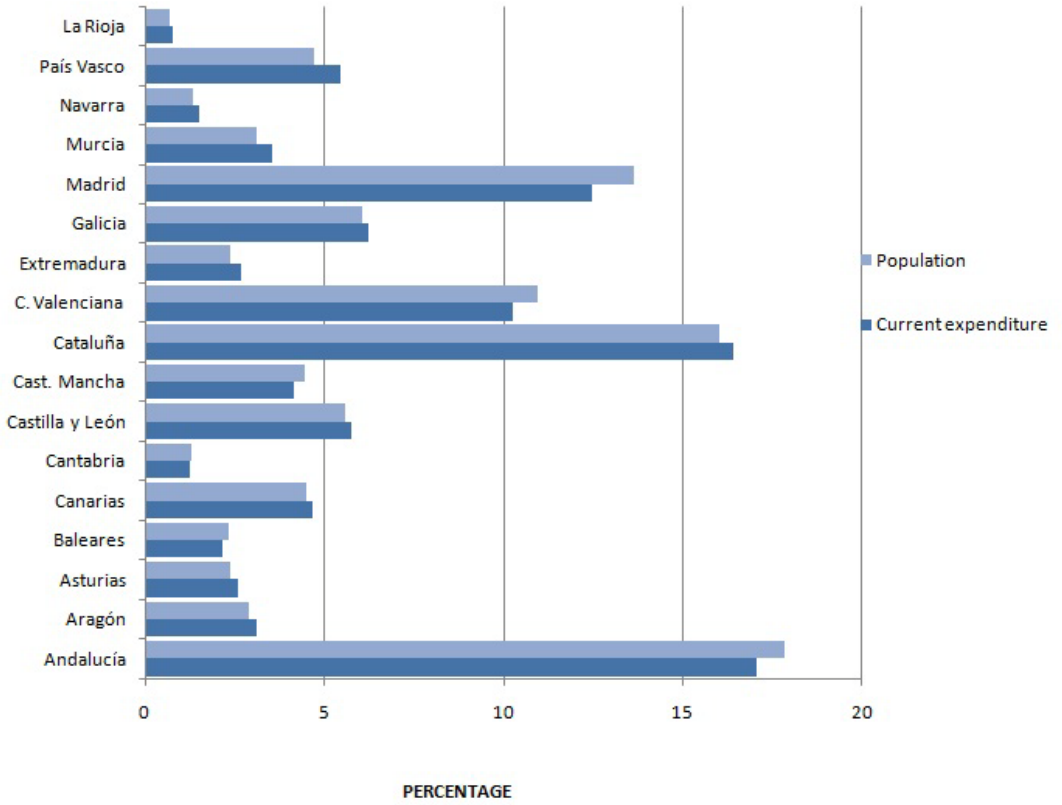
Notes	Figures in millions of Euros, except the average annual growth rate (AAGR), which is expressed in percentages.
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.

In terms of total expenditure, which includes capital expenditures, Murcia, Castilla-La Mancha and Rioja are the most dynamic regions, while Cantabria, Asturias, and Galicia have shown a lower average rate of growth.

According to 2008 data, 45.6% of the public sector health expenditure was originated by three autonomous communities: Andalucía, which spent 10,307 million Euros, Cataluña, which spent 9,872 million Euros and Madrid, at 7,444 million Euros. These autonomous communities account for 47.5% of the population in Spain. Rioja, Cantabria and Navarra are the autonomous communities with the smallest expenditure, in absolute values.

Figure 2.6 shows the weights of current expenditure and the population of each autonomous community in relation to the totals of both variables. The differences between the two indicators for each of the autonomous communities reflect not only the varying degrees of financial effort made in health care but also, and to a large extent, the different realities, in terms of population and geography, of the autonomous communities, such as differences in age and dispersion, among others.

Figure 2.6 **Current expenditure on health by public sector and population. Percentage distribution by autonomous community. Spain, 2008.**



Notes	Percentage of each community in the total of all autonomous communities.
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report. National Statistics Institute. Municipal Register of Inhabitants.

Thus, Madrid, with 13.6 % of the population, accounts for 12.5% of the expenditure. Baleares, Castilla-La Mancha, Comunidad Valenciana, Andalucía and Cantabria also have a population share that is higher than their share of expenditure. For the rest of the autonomous communities, the situation is the opposite, with País Vasco, Murcia and Extremadura showing the most pronounced differences.

A better understanding of the distribution of the public expenditure on health among the autonomous communities and an analysis of the importance of the expenditure within each of the regional economies can be achieved by looking at the health expenditure as a share of the GDP indicator, although it must be remembered that while income elasticity is greater than one in a general analysis of expenditure by countries – suggesting that more income will mean more health expenditure – this is not the case when the same indicator is analysed at the regional level. As discussed in the report prepared by the Working Group of the Conference of Presidents of the Autonomous Communities for Analysis of Health Expenditure (presided by the General Comptroller of the State Administration - IGAE[7]) the data on health expenditure as a percentage of the GDP that are obtained at the regional level do not reflect the usual relationship with income level because the differences between territories are not explained only by differences in income levels (as occurs between countries) but also by solidarity between territories. This is because resource allocation among autonomous communities makes use of levelling mechanisms intended to guarantee the equity of the system.

As shown in Table 2.11, Extremadura (at 9.2%), Murcia (at 7.6%) and Castilla-La Mancha (at 7.0%) are the autonomous communities that in 2008 had the highest percentage of health expenditure with respect to the GDP. Madrid (at 3.8%) and Baleares (at 4.8%) are at the opposite end of the range.

Table 2.11 **Consolidated public expenditure on health as a percentage of the gross domestic product (GDP) by autonomous community. Spain, 2004 and 2008.**

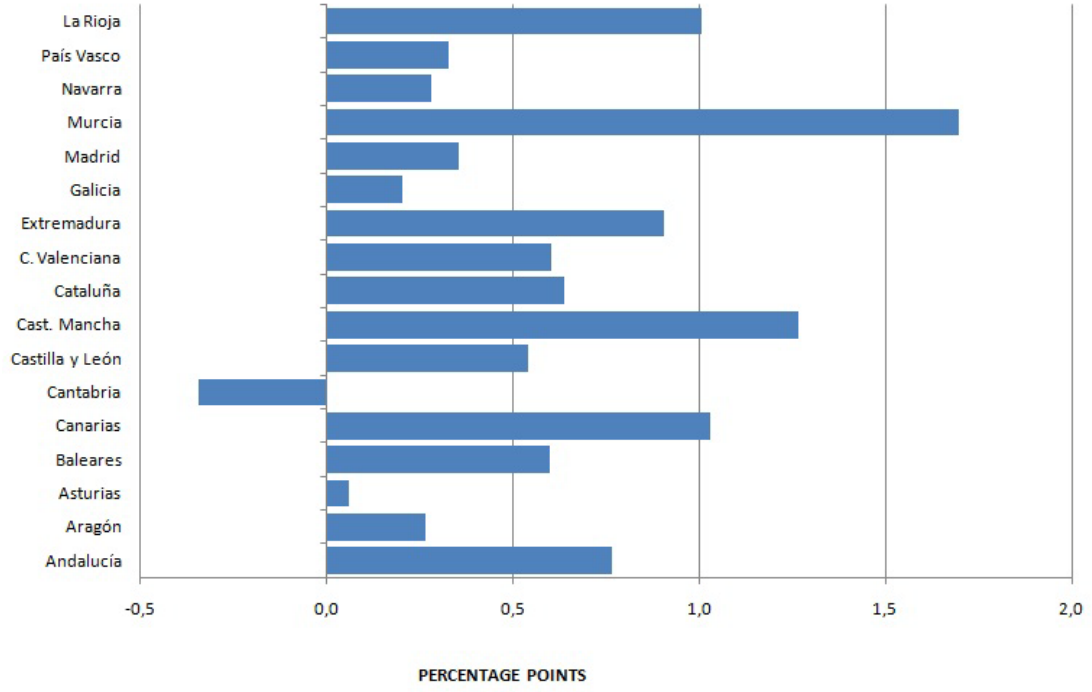
	% Expenditure / GDP			% Expenditure / GDP	
	2004	2008		2004	2008
Andalucía	6.1	6.9	Comunidad Valenciana	5.2	5.8
Aragón	5.3	5.6	Extremadura	8.1	9.2
Asturias	6.5	6.5	Galicia	6.6	6.8
Baleares	4.2	4.8	Madrid	3.5	3.8
Canarias	5.6	6.6	Murcia	6.1	7.6
Cantabria	6.3	5.5	Navarra	4.6	4.9
Castilla y León	5.6	6.2	País Vasco	4.5	4.9
Castilla-La Mancha	5.7	7.0	La Rioja	5.0	5.9
Cataluña	4.1	4.9	**Average of all communities**	**5.0**	**5.6**

Source MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report.
National Statistics Institute. Regional Accounts of Spain.

Figure 2.7 shows the variation, during the 2004-2008 period, in current expenditure on health as a percentage of the GDP.

[7] Institute of Fiscal Studies. Ministry of Economics and Finance. Ministry of Health and Consumer Affairs. September 2007.

Figure 2.7 **Public current expenditure on health as a percentage of the (GDP), by autonomous community. Variation from 2004 to 2008.**



Notes	Differences in percentage points
Source	MSPSI. Sub-Directorate of Economic Analysis and the Cohesion Fund. Public Expenditure on Health Statistical Report. National Statistics Institute. Regional Accounts of Spain.

2.4 The Health Cohesion Fund

The Health Cohesion Fund was created by Law 21/2001, of 27 December 2001, which regulates the fiscal and administrative measures of the autonomous community financing system. Its purpose is to guarantee equal access to public sector health services throughout Spain and also to ensure care for citizens from other European Union countries or from countries with which Spain has reciprocal health care accords.

Management of the Fund was initially regulated by Royal Decree 1247/2002, of 3 December 2002, which defined the criteria and procedures for the compensation given to autonomous communities in exchange for the health services they provided to residents of other autonomous communities within Spain and also to foreign patients living in or visiting Spain temporarily and who have health care coverage provided by another country. The provisions established a series of hospital and ambulatory processes that had to be financed, because the complexity of these processes was deemed to be such that some autonomous communities lacked the necessary hospital services or such services were insufficient for attending the population within the territory. Distribution of the Health Cohesion Fund among the autonomous communities was based on these criteria during the 2002-2005 period.

Law 16/2003, of 28 May 2003, on the Cohesion and Quality of the SNS, with regard to the quality guarantee policy aiming to rationalise the organisation of health care services and increase system efficiency, introduced regulations concerning the services to be provided at SNS Reference Facilities and determined that the CISNS – using a joint planning approach – would be the body to designate such services, and that they would be financed through the Health Cohesion Fund.

Subsequently, in October of 2006, a new decree was published to regulate the management of the Health Cohesion Fund (RD 1207/2006). This decree brings together the guidelines laid down in the aforementioned Law, in the Conference of Presidents held on 10 September 2005 and in the Financial and Fiscal Policy Council, held on 13 September 2005.

As a result of the novelties introduced by the enactment of the current Royal Decree, with respect to the previous one, the amount of the budget item corresponding to compensation for health care provided to patients residing in Spain but treated in an autonomous community other than their own, experienced rapid growth starting in 2006. However, the increase in the amounts referring to compensation for health care provided to persons temporarily in Spain but with health coverage by another country can be attributed to improvements in international invoicing management (real cost).

These increments can be seen in the following Table 2.12 and Figure 2.8, which reflect the evolution of Health Cohesion Fund (HCF) distribution.

Table 2.12 Distribution of Health Cohesion Fund (HCF). 2002-2009.

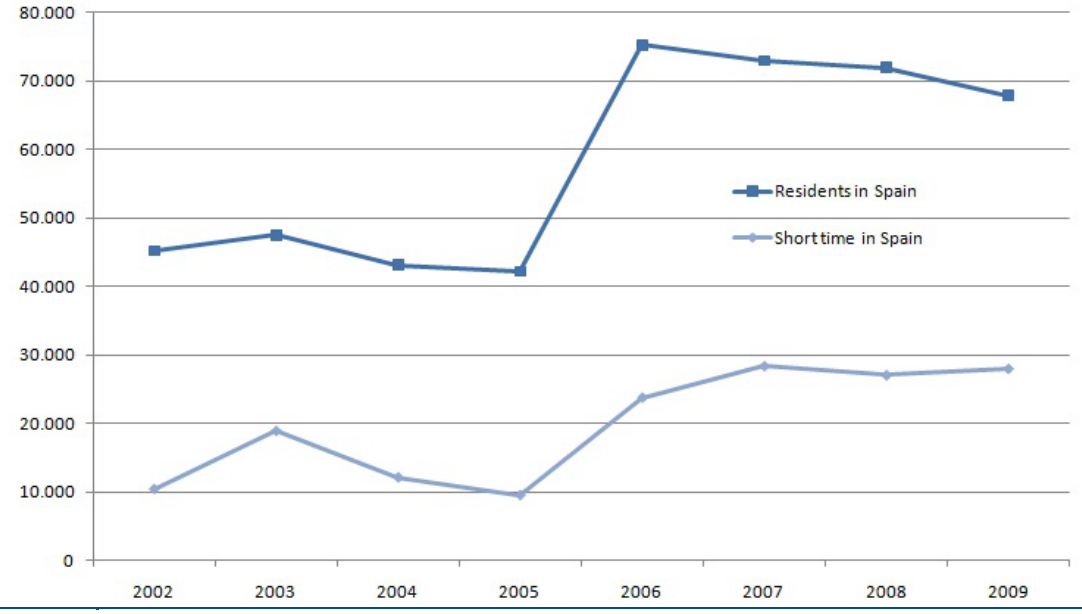
	Distribution HCF under RD 1247/2002 of 3 December				Distribution HCF under RD 1207/2006 of 20 October			
	2002	2003	2004	2005	2006	2007	2008	2009
Residents of Spain	45,193	47,482	43,158	42,203	75,237	72,966	71,975	67,873
Short time in Spain	10,375	18,877	12,077	9,472	23,794	28,384	27,069	28,001

Notes: Figures in thousands of Euros

Source: Sub-Directorate General of Economic Analysis and the Cohesion Fund of the MSPSI.

In 2009 a slight decrease is seen in the compensation between autonomous communities, due to the efforts made by all of them in the area of care provision. Such efforts have brought an increment in the care resources of each autonomous community and thus a reduced need to refer patients to other autonomous communities for treatment, which is now limited to only the most highly-specialised and complex forms of treatment.

Figure 2.8 Distribution of Health Cohesion Fund (HCF). 2002-2009.



Notes	Figures in thousands of Euros.
Source	Sub-Directorate General of Economic Analysis and Cohesion Fund of the MSPSI.

Table 2.13 Distribution of Health Cohesion Fund (HCF). Residents of Spain treated in a different autonomous community.

AUTONOMOUS COMMUNITY	DISTRIBUTION UNDER RD 1247/2002 OF 3 DECEMBER				DISTRIBUTION UNDER RD 1207/2006 OF 20 OCTOBER			
	2002	2003	2004	2005	2006	2007	2008	2009
Andalucía			72	12	1,229	2,091		537
Asturias	3	36	-20	20				
Cantabria	3,443	3,671	4,165	4,126	6,425	5,584	8,071	7,017
Castilla-La Mancha			339					
Cataluña	8,381	9,840	7,377	8,905	13,126	14,095	22,111	23,573
Comunidad Valenciana	2,117	629	650	628	1,548		4,315	
Galicia			28					
Madrid	31,176	31,611	30,894	27,642	52,910	50,947	37,477	36,546
Murcia		988	-409	291				
País Vasco	73	706	62	580		250		
TOTAL	45,193	47,482	43,158	42,203	75,237	72,966	71,975	67,873

Notes	Figures in thousands of Euros. Negative figures correspond to adjustment of preceding year's liquidation.
Source	Sub-Directorate General of Economic Analysis and the Cohesion Fund of the MSPSI.

Table 2.13 shows the amounts and the autonomous communities that have received funding through the HCF for the health care provided to patients who are residents of Spain but live in a different autonomous community. As shown, Madrid, Cataluña and Cantabria have received the highest amounts in compensation, and the evolution in the amount received has remained constant; they are followed by Comunidad Valenciana and Andalucía, which show a less constant evolution.

Table 2.14 shows the distribution among the autonomous communities of the positive balance at the national level between the amount received by Spain for the health services it provided to citizens insured by other countries and the amount paid by Spain for the health services provided in other countries to citizens insured in Spain.

Table 2.14 Distribution of Health Cohesion Fund (HCF). People temporarily in Spain and insured by another country.

AUTONOMOUS COMMUNITY	DISTRIBUTION UNDER RD 1247/2002 OF 3 DECEMBER			DISTRIBUTION UNDER RD 1207/2006 OF 20 OCTOBER				
	2002	2003	2004	2005	2006	2007	2008	2009
Andalucía	1,460	1,404	515	379	395	6,358	13,006	6,941
Aragón	260	311	157	82				
Asturias	233	477	218	112	10	199	49	132
Baleares	1,482	1,975	1,653	872	3,103	3,520	2,680	4,665
Canarias	943	3,634	908	1,417	9,221	3,747	2,809	4,173
Cantabria	111	168	399	99	180	142	137	183
Castilla y León	459	809	475	267				
Castilla-La Mancha	94	113	93	45				
Cataluña	1,825	2,747	2,267	905				
Comunidad Valenciana	349	2,660	2,865	4,151	7,011	10,162	4,841	7,339
Extremadura	173	378	144	76	422	255	677	773
Galicia	1,448	1,891	1,119	662	1,761	2,044	1,873	2,087
Madrid	215	876	198	80				
Murcia	882	506	629	111	1,691	1,959	990	1,672
Navarra	127	187	85	53				
País Vasco	280	696	330	150				
La Rioja	25	12	8	3				17
Ceuta	4	7	7	3			6	15
Melilla	3	29	8	4				4
TOTAL	10,375	18,877	12,077	9,472	23,794	28,384	27,069	28,001

Notes: Figures in thousands of Euros.

Source: National Social Security Institute and the Sub-Directorate General of Economic Analysis and the Cohesion Fund of the MSPSI.

As the table illustrates, enactment of the 2006 Royal Decree meant a change in the distribution criteria, as it required autonomous communities to present a positive balance between invoices issued to citizens insured in another country (who receive care in Spain) and the invoices collected by other countries for insured people from that autonomous community receiving health care abroad. However, as mentioned above, the considerable increase seen in recent years is basically the result of the improved management instruments used in the invoicing of health care provided to foreign citizens by the autonomous communities.

2.5 Funds for SNS health strategies in the autonomous communities

Spanish Law 16/2003, of 28 May 2003, on the Cohesion and Quality of the SNS, states that health strategies are to be established jointly by the Ministry of Health and Consumer Affairs and the competent bodies of the autonomous communities, in relation to the prevalent pathologies, specifying criteria on how the services are to be organised so as to best treat pathologies in a comprehensive manner in the whole of the SNS and

also determining minimum standards and basic models of care, detailing specific actions of known effectiveness, evaluation tools and activity indicators.

Article 86 of Spanish General Budgetary Law 47/2003, of 26 November 2003, in its paragraph *"Managed subsidies,"* provides that:

— *The objective criteria used as the basis for territorial distribution of the subsidies, as well as their actual distribution, will be established by the corresponding Sector Conference at the beginning of each fiscal year. The financial commitments for the General Administration of the State will be formalised by resolutions adopted by the Council of Ministers.*

Chapter X – *"On the Interterritorial Council"* of the law on the Cohesion and Quality of the SNS assigns the function of Sector Conference [Sector Conferences are the bodies that facilitate co-operation between national government and the autonomous communities in a given sector] in the sphere of health strategies to the Interterritorial Council of the SNS, since this is the standing body in the area of co-ordination and information among the regional health services and between them and the national government, with the aim of promoting cohesion within the SNS.

Therefore, the CISNS, in plenary session, adopts a resolution determining the objective criteria for distribution. The purpose of the resolution is to fund activities within the Health Strategies defined in Article 64 of the aforementioned Law on Cohesion and Quality, promoting strategies for the promotion of health and the prevention of prevalent diseases that cause the most illness and death in the population.

Subsequently the Council of Ministers sets the amounts corresponding to each autonomous community.

The funds distributed are in the budget of expenses of the Ministry of Health and Social Policy, in budget heading 26.12.311O.454 – *Current Transfer to Autonomous Communities, Health Strategies of the SNS*, of the Directorate General of Professional Regulation, Cohesion in the SNS and Executive Inspection; and in budget heading 26.13.311O.752 – *Capital Transfer to Autonomous Communities. Investment Plan for the development of Health Information Systems*, of the Quality Agency of the SNS.

The funds approved since 2004 are detailed in the table below (Table 2.15). The amounts approved in fiscal year 2009 for each autonomous community and by funding line are shown in Table 2.16.

Table 2.15 Funds approved for SNS strategies. 2004 - 2009.

2004	**TOTAL**	**19,590,000**
Council of Ministers Resolution 8/10/2004 for €3,000,000	Smoking prevention	3,000,000
Council of Ministers Resolution 8/10/2004 for €6,590,000	Smoking prevention	3,000,000
	Safety of health care interventions	3,590,000
Royal Decree 2008/2004	Smoking pr vention	6,000,000
for 10,000,000€	Diabetes prevention	4,000,000
2005	**TOTAL**	**30,115,550**
Council of Ministers Resolution 6/05/2005 for €30,115,550	Smoking prevention and monitoring	12,152,800
	Patient and professional safety	6,000,000
	Diabetes	6,000, 00
	Information Systems: Chapter IV	4,000,000
	Information Systems: Chapter VII	1,962,750
2006	**TOTAL**	**30,678,610**
Council of Ministers Resolution 2/06/2006 for €30,678,610	Smoking prevention and monitoring	14,000,000
	Patient safety	5,000,000
	Healt strategies	6,715,860
	Perinatal care-gender perspective	2,000,000
	Information systems: Chapter IV	1,000,000
	Information syste s: Chapter VII	1,962,750
2007	**TOTAL**	**15,962,750**
Council of Ministers Resolution 27/04/2007 for €15,962,750	Patient safet and clinical excellence	5,000,000
	Health strategies	5,000,000
	Perinatal care and gender	2,000,000
	Information Systems: Chap er IV	2,000,000
	Information Systems: Chapter VII	1,962,750
2008	**TOTAL**	**26,678,610**
Council of Ministers Resolution 8/02/2008 for €21,962,750	Patient safety	5,000,000
	Health strategies	6,000,000
	Perinatal care	4,000,000
	Information systems: Chapt r IV	3,000,000
	I.S. Interoperability: Chapter IV	2,000,000
	I.S. Equipment: Chapter VII	1,962,750
Council of Ministers Resolution 24/07/2008 for €4,715,860	Mental health strategies	4,715,860
2009	**TOTAL**	**26,678,500**
Council of Ministers Resolution 13/03/2009 for €26,678,500	Patient safety	5,000,000
	Health strategies	10,715,750
	Perinatal care	4,000,000
	Information Sy tems: Chapter IV	3,000,000
	I.S. Interoperability: Chapter IV	2,000,000
	I.S. Equipment: Chapter VII	1,962,750
2010	**TOTAL**	**26,6 8,500,00**
Council of Ministers Resolution 9/04/2010 for €26,678,500	Patient safety	5,000,000
	Health strategies	10,715,750
	Perinatal care	4,000,000
	Information Systems: Chapter IV	3,000,000
	I.S. Interoperability: Chapter IV	2,000,000
	I.S. Equipme t: Chapter VII	1,962,750

Source Sub-Directorate of Economic Analysis and the Cohesion Fund. MSPSI.

Table 2.16 SNS Health Strategies 2009. Amounts set by the Council of Ministers.

	Patient safety	Specific health strategies	Perinatal care	SNS Health Information System	Inter-operability	Equipment (ch. VII)	Total
National total	5,000,000	10,715,750	4,000,000	3,000,000	2,000,000	1,962,750	26,678,500
Andalucía	945,385	2,026,101	656,884	567,231	378,154	122,672	4,696,427
Aragón	152,940	327,773	118,778	91,764	61,176	122,672	875,103
Asturias	124,496	266,814	48,205	74,698	49,799	122,672	686,684
Baleares	123,656	265,012	127,237	74,193	49,462	122,672	762,232
Canarias	239,275	512,803	158,886	143,565	95,710	122,672	1,272,911
Cantabria	67,097	143,799	36,701	40,258	26,839	122,672	437,366
Castilla y León	294,757	631,708	146,216	176,854	117,903	122,672	1,490,110
Castilla-La Mancha	235,487	504,684	176,727	141,292	94,195	122,672	1,275,057
Cataluña	848,781	1,819,064	848,479	509,268	339,512	122,672	4,487,776
Com. Valenciana	579,710	1,242,405	500,994	347,826	231,884	122,672	3,025,491
Extremadura	126,526	271,163	56,697	75,915	50,610	122,672	703,583
Galicia	320,902	687,742	126,953	192,541	128,361	122,672	1,579,171
Madrid	722,867	1,549,211	755,897	433,720	289,147	122,672	3,873,514
Murcia	164,373	352,275	183,893	98,624	65,749	122,672	987,586
Rioja	36,595	78,429	35,085	21,957	14,638	122,672	309,376
Ceuta (INGESA)	8,919	19,118	8,618	5,353	3,567	61,335	106,910
Melilla (INGESA)	8,234	17,649	13,750	4,941	3,294	61,335	109,203

Notes These amounts were approved by the Council of Ministers Resolution of 13 March 2009.
Source Sub-Directorate of Economic Analysis and the Cohesion Fund. MSPSI.

3 Resources and care activity

3.1 Primary care

The Primary Care Information System (SIAP) was created in 2004 at the instance of the Interterritorial Council of the SNS (CISNS), which entrusted the task to the Subcommission on Information Systems of the SNS. The earliest SNS primary care data became available in 2006. Currently, disaggregated statistical information is available on each autonomous community and its health areas; this information is available through the web site of the MSPSI in a number of formats, and was the source used to prepare this report.

Structure of the covered population

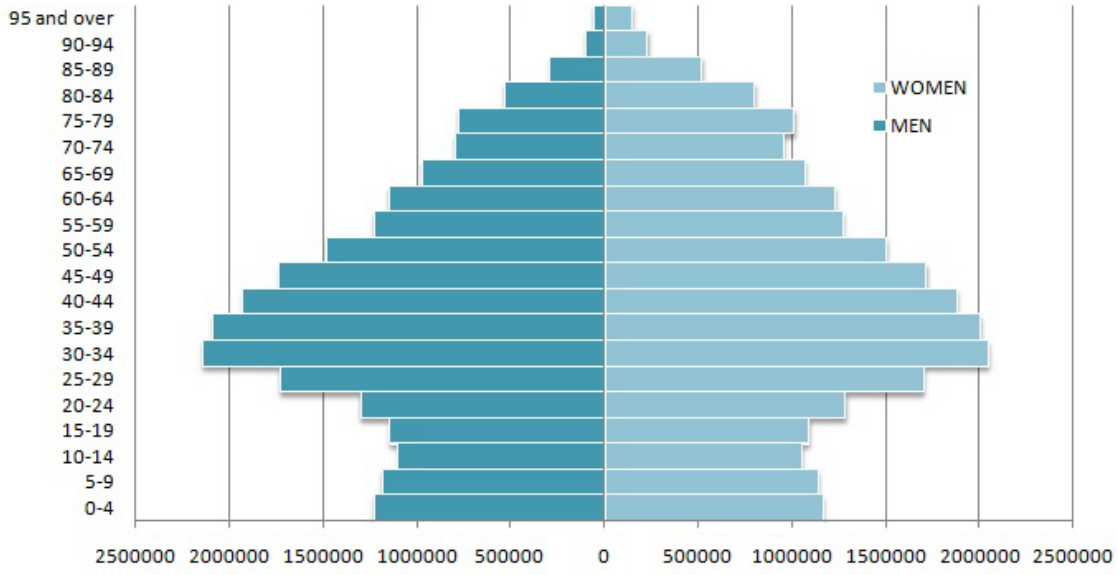
The main value of having such information available is that it enables comparative analyses to be performed on the population pyramids of each health area (health areas – the basic structure of the health care system- are responsible for the management of health centres and services within the territorial boundaries set by the autonomous community). This in turn allows the diversity of the age composition of the population attended in each of them to be visualized, opening up an interesting sphere of analysis for the health care sector and one not commonly found in demographic studies conducted on the national level. Furthermore, this data is useful in the construction of various indicators.

Figure 3.1 presents the population pyramid of all the individuals covered by the SNS. The Primary Care Information System permits access to the population pyramid of each health area and makes the different types of pyramids visible (progressive, stationary, regressive, etc.).[1]

Due to the various adaptations that the different autonomous communities have had to make in the concept of health area, in an effort to reconcile, in practical terms, questions of physical accessibility, quality in clinical practice and efficiency in the allocation of resources, a high degree of variability is found in the populations of the different health areas (Figure 3.2).

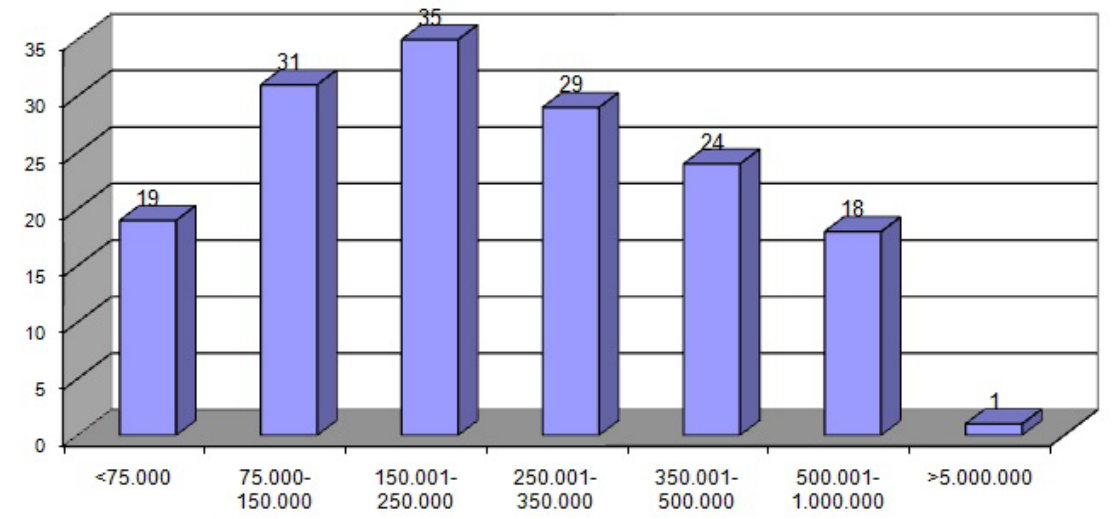
[1] The Primary Care Information System (SIAP) can be consulted at [http://pestadistico.msc.es/PEMSC25/ArbolNodos.aspx]

Figure 3.1 Population pyramid of Spain. 2009.



Source MSPSI. SIAP-SNS.

Figure 3.2 Number of health areas by assigned population. 2009.



Source MSPSI. SIAP-SNS.

Structural resources

This section deals with the number of basic health zones into which care is organised in each health area and also the number of health centres and local health facilities in which such care is provided. In relation to the variability mentioned in the preceding section,

significant differences are also found in the distribution of the structural resources in the health areas, depending essentially on their size and no doubt influenced by the population's level of dispersion[2] (Table 3.1). In other words, the need for greater structural resources does not depend only on there being a larger volume of population to attend; the need also increases in accordance with the number of and distance between towns and villages, although the population figures may be low.

For this reason the number of basic zones in each health area oscillates between 1 and 215,[3] in the case of health centres the number oscillates between 2 and 230, and for local health facilities it is between 0 and 594. The mean values are determined by dividing the total number of SNS resources of a given type by the total number of health areas.

Table 3.1 **Distribution of structural resources by health area (maximum, mean and minimum values). 2009.**

	STRUCTURAL RESOURCES / HEALTH AREA		
	BASIC ZONES	HEALTH CENTRES	LOCAL HEALTH FACILITIES
MAXIMUM	215	230	594
MEAN	17	19	65
MINIMUM	1	2	0
Notes	Basic zones, health centres and local health facilities are considered structural resources.		
Source	MSPSI. SIAP-SNS.		

In general, Castilla y León and Castilla-La Mancha, because they have a high level of dispersion, are the regions with the highest number of local health facilities per health area. Especially noteworthy are the areas of León, with 594, Burgos with 593, Guadalajara with 416 and Salamanca, with 412 of this type of resource. As regards health centres it is worth pointing out that territorial planning in Cataluña is such that the health region of Barcelona is considered a health area, which means that, with its 215 basic zones and 230 health centres, it is the largest in the SNS in 2009. Apart from that particularity, the health areas of Galicia have the highest number of health centres. Standing out are Ourense with 99, Lugo with 73 and A Coruña with 52 health centres. The disaggregated data by autonomous community are presented in Table 3.2.

Table 3.2 **Distribution of structural resources by autonomous community. 2009.**

AUTONOMOUS COMMUNITY	STRUCTURAL RESOURCES			
	HEALTH AREAS [1]	BASIC ZONES [2]	HEALTH CENTRES	LOCAL HEALTH FACILITIES
Andalucía	33	216	390	1116
Aragón	8	125	117	915
Asturias	8	84	68	151
Baleares	3	57	57	103
Canarias	7	111	111	170
Cantabria	4	41	42	121
Castilla y León	11	248	243	3647
Castilla- La Mancha	8	201	200	1113
Cataluña	7	362	415	831

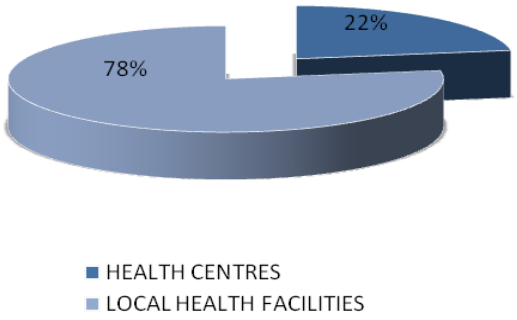
[2] Standardised data of this type is not currently available at the national level and with disaggregation by health area.

[3] The health areas of Granada and Sevilla each have only one basic health zone.

Comunidad Valenciana	23	240	259	583
Extremadura	8	113	110	414
Galicia	7	315	390	93
Madrid	11	310	258	158
Murcia	6	89	79	189
Navarra	3	54	54	244
País Vasco	7	122	135	185
Rioja	1	19	19	174
Ceuta and Melilla	2	7	7	0
SNS	157	2,714	2,954	10,207
Notes	[1] In the SIAP-SNS a health area is an administrative district that clusters a set of primary care centres and professionals for organisational and functional purposes. The autonomous communities have different names for equivalent divisions (sector, region, area, department, etc.) according to the nomenclature used by each autonomous community in its territorial administrative division. [2] SIAP information at final reporting date for inclusion in this document.			
Source	MSPSI. SIAP-SNS.			

The ratio of health centres to local health facilities is, on average, approximately 1 to 4, as shown in Figure 3.3. For this indicator there is a high degree of variability among the autonomous communities; this situation can be explained by the fundamental influence of the number of towns and villages existing in the region.[3] Castilla y León has the highest ratio in all of the SNS,[4] with 15.01 local health facilities per health centre. It is followed by Rioja with 9.16 and Aragón with 7.82. At the other extreme are Galicia with 0.24, Madrid with 0.61 and País Vasco with 1.37.

Figure 3.3 **Proportion of health centres / local health facilities. 2009.**



Source MSPSI. SIAP-SNS.

Human resources

As of 31 December 2009, there were 63,302 health professionals working in a "care providing" capacity for the SNS, in family medicine, paediatrics and nursing, at health centres and local health facilities. This figure does not include positions devoted exclusively to urgent care or other variations, and it excludes persons not working in "caring" positions, such as administrators.

[4] From the list of towns and villages maintained by the National Statistics Institute (INE).

The distribution of the said resources by autonomous community, from the numerical perspective and also from the perspective of the "mean ratio" of population to each type of professional, is shown in the following table (Table 3.3).

Table 3.3 Distribution of human resources by autonomous community. 2009.

AUTONOMOUS COMMUNITY	HUMAN RESOURCES							
	Family Medicine		Paediatrics		Nursing		Administrative Staff	
	Profes-sionals	% Women	Profes-sionals	% Women	Profes-sionals	% Women	Profes-sionals	% Women
Andalucía	4,748	36.6	1,098	57.0	4,437	64.6	3,001	81.2
Aragón	990	43.1	167	68.8	933	85.4	341	89.7
Asturias	670	50.6	127	67.7	771	81.1	426	80.2
Baleares	525	40.3	141	53.9	545	84.9	277	78.3
Canarias	1,101	45.5	302	64.2	1,177	--	562	--
Cantabria	360	46.6	74	63.5	375	85.8	168	88.6
Castilla y León	2,383	54.2	287	61.3	2,105	97.1	801	96.6
Castilla- La Mancha	1,401	38.1	249	60.6	1,466	63.5	598	96.9
Cataluña	4,486	--	995	--	5,053	--	3,232	--
Comunidad Valenciana	2,665	43.0	756	63.8	2,734	70.3	1,520	85.0
Extremadura	810	37.5	134	60.4	898	67.9	284	82.0
Galicia	1,888	44.7	328	62.8	1,819	79.7	981	72.6
Madrid	3,513	67.1	875	74.5	3,245	78.6	2,175	--
Murcia	819	44.08	239	61.0	800	63.3	422	81.9
Navarra	377	56.5	98	69.3	448	95.7	260	89.2
País Vasco	1,382	52.9	303	68.9	1,570	91.2	703	88.9
Rioja	220	40.4	39	69.2	204	90.2	67	85.0
Ceuta and Melilla	67	37.3	25	48.0	80	82.5	33	75.7
SNS	28,405	47.2	6,237	64.0	28,660	76.7	15,851	84.2

Source MSPSI. SIAP-SNS.

As the table shows, there are significant differences in all the professional categories, especially in family medicine and administrative staff (Table 3.4). However, to be able to make valid comparisons, it is also necessary to take into account the population pyramid and the population dispersion factor.

Table 3.4 Ratios of professionals per 1000 inhabitants (maximum, mean and minimum values). 2009.

	Family Medicine	Paediatrics	Nursing	Non-health personnel
MAXIMUM	1.09	1.16	0.96	0.75
MEAN	0.71	0.91	0.72	0.56
MINIMUM	0.57	0.80	0.60	0.36

Source MSPSI. SIAP-SNS.

Comparing the years from 2007 to 2009, an increase can be seen in the number of professionals in all job categories. There are a total of 2647 more employees in the SNS as a whole, which means an increase of 3.19% of the personnel. The largest increases are in nursing staff (4.98%) and family medicine (3.69%). The figures corresponding to the last three years are shown in Table 3.5.

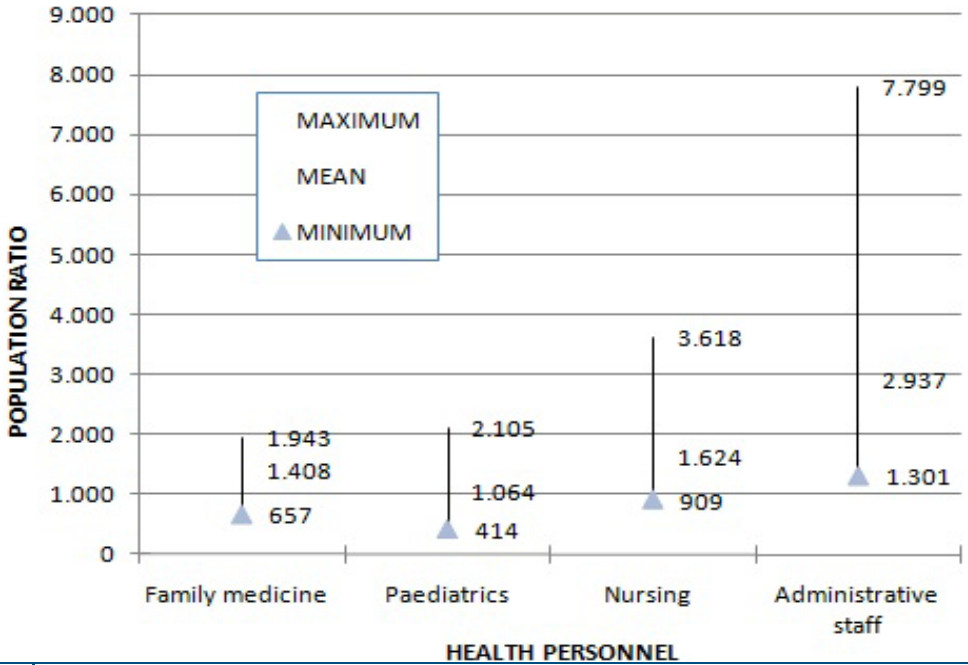
Table 3.5 **Increase in the number of professionals 2007-2009.**

PROFESSIONAL CATEGORY	Number of positions				
	2007	2008	2009	Increase 2007-2009.	
				Number	%
Family Medicine	27,395	27,911	28,405	1,010	3.69
Paediatrics	6,087	6,215	6,237	150	2.46
Nursing	27,300	27,433	28,660	1,360	4.98
Non-health personnel	22,068	21,606	22,195	127	0.58
Total personnel	82,850	83,165	85,497	2,647	3.19

Source MSPSI. SIAP-SNS.

The ratios of population assigned to each professional oscillate in intervals that vary according to the professional category, depending on factors such as the organisation of each autonomous community (especially as regards non-health personnel). The ratios for the whole of the SNS can be seen in Figure 3.4.

Figure 3.4 **Ratio population/health professional. 2009.**



Source MSPSI. SIAP-SNS.

In turn, the distribution of the mean ratios of population assigned to each professional by autonomous community is as follows (Table 3.6):

Table 3.6 Distribution of the mean ratios of population/professional. 2009.

AUTONOMOUS COMMUNITY	Family Medicine	Paediatrics	Nursing	Administrative Staff
Andalucía	1,452	1,102	1,827	2,701
Aragón	1,187	1,000	1,439	3,936
Asturias	1,455	797	1,396	2,526
Baleares	1,688	1,052	1,898	3,734
Canarias	1,509	956	1,657	3,471
Cantabria	1,378	1,039	1,527	3,410
Castilla y León	945	911	1,175	3,087
Castilla- La Mancha	1,277	1,027	1,386	3,398
Cataluña	1,409	1,333	1,513	2,366
Comunidad Valenciana	1,552	986	1,786	3,212
Extremadura	1,199	971	1,213	3,837
Galicia	1,316	932	1,526	2,830
Madrid	1,535	1,068	1,949	2,908
Murcia	1,465	1,047	1,811	3,433
Navarra	1,420	983	-	2,429
País Vasco	1,775	862	1,729	3,862
Rioja	1,244	994	1,532	4,663
Ceuta and Melilla	1,601	1,099	1,684	4,083
SNS	1,408	1,064	1,624	2,937

Source MSPSI. SIAP-SNS.

Table 3.7 Variation of the assigned population per family doctor and paediatrician. 2007-2009.

	FAMILY MEDICINE					
RANGE OF ASSIGNED POPULATION	2007		2008		2009	
	Number of professionals	% of total	Number of professionals	% of total	Number of professionals	% of total
<500	1,562	6.87	1,552	6.56	1,506	6.32
501-1.000	2,218	9.76	2,307	9.75	2,278	9.56
1.001-1.500	6,215	27.34	7,444	31.45	8,190	34.38
1.501-2.000	11,931	52.48	11,826	49.96	11,379	47.76
>2.000	807	3.55	541	2.29	471	1.98
	PAEDIATRICS					
RANGE OF ASSIGNED POPULATION	2007		2008		2009	
	Number of professionals	% of total	Number of professionals	% of total	Number of professionals	% of total
<750	796	16.33	804	15.74	748	14.57
751-1.000	1,560	32.01	1,658	32.45	1,715	33.40
1.001-1.250	1,743	35.76	1,867	36.54	1,848	35.99
1.251-1.500	651	13.36	646	12.64	654	12.74
>1.500	124	2.54	134	2.62	170	3.31

Source MSPSI. SIAP-SNS.

Over the last three years, the number of family doctors with an assigned population in the highest ranges has fallen. More specifically, the percentage of professionals with an assigned population of between 1501 and 2000 persons fell from 52.48% to 47.76%, while

the number of professionals with an assigned population of more than 2000 went down by practically half, from 807 to 471.

The Service Package

Since the 1990s the Primary Care Service Package (CSAP) has been a key instrument in the organisation and management of primary care in Spain, and has also been responsible for the introduction of explicit quality criteria and systematic evaluation of the health care benefits offered to the population at this care level.

The transfer of responsibility in the area of health to the autonomous communities (1981-2002) has given rise to different developments and approaches in their respective CSAP, although a series of common or generic features can also be described, which facilitate overall comprehension without reducing the significance of their distinguishing characteristics.

In the context of primary care in Spain, the term Primary Care Service Package does not refer to a catalogue of benefits, that is, to the exhaustive list of benefits offered in a health zone or area. The CSAP is a selection of services organised in a specific way; it responds to the needs and demands of the population, is founded on scientific-technical criteria and health policy priorities and is based on population criteria. The services tend to be grouped around the care provided to population groups (children, women, adults and the elderly), although they also sometimes include community outreach and family services, public health activities or the care provided by support units.

The most basic or elementary unit in the CSAP is the "*service.*" Here, the term "*service*" refers to a set of activities or action criteria that serve to guide attention to a clinical or preventive health problem or process with specification of the target group and also taking into account aspects such as inclusion and exclusion, accreditation requirements, indicators, annexes and bibliographical support.

The most characteristic element of the services is the specification of quality criteria for the recommended actions, known as technical norms. These norms address the issues of quality, processes and criteria regarding good care practices. The document "**Primary Care Service Packages: development, organisation, uses and content**[5]*"* contains a detailed description of the clinical content of these norms in the various autonomous communities.

The Service Packages have evolved in distinct ways; sometimes the differences between them have to do with organisation and denomination and while at other times their lines of action differ.

Table 3.8 presents a classification of the Service Packages of the autonomous communities, grouping them into three large categories (Table 3.8).

A description of the particular features of the CSAP of each of the autonomous communities can be found in the document cited above. *("Primary Care Service Packages: development, organisation, uses and content"*).

[5] The original document "Cartera de servicios de atención primaria. Desarrollo, organización, usos y contenido" can be consulted at [http://www.msc.es/estadEstudios/estadisticas/docs/siap/Cartera_de_Servicios_de_Atencion_Primaria_2010.pdf]

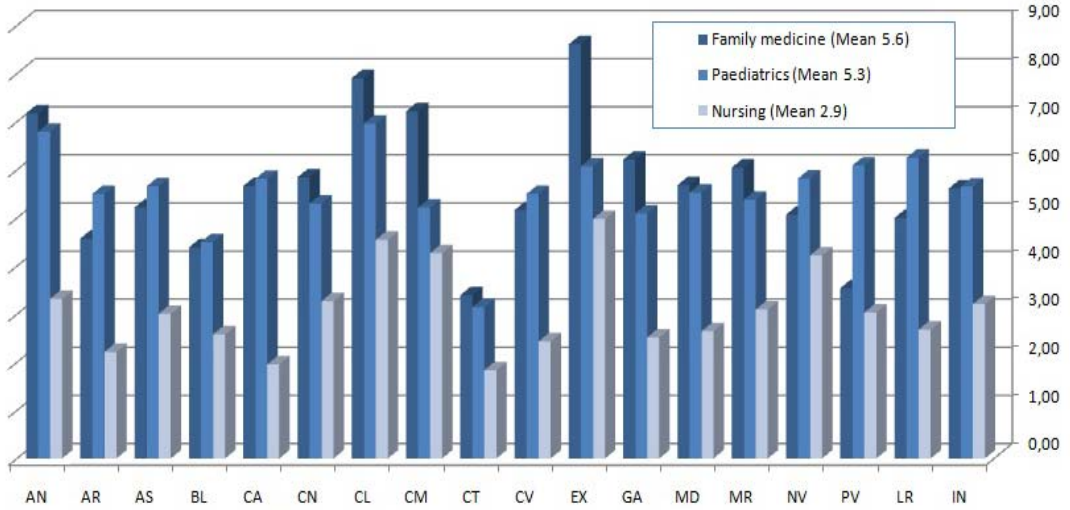
Table 3.8	**Classification of the service packages of the autonomous communities.**
AUTONOMOUS COMMUNITY	
Cantabria	BASED ON COVERAGE AND QUALITY CRITERIA
Castilla y León	
Extremadura	
Galicia	
Madrid	
Murcia	
Ceuta and Melilla	
Andalucía	BASED ON CARE PROCESSES
Asturias	
Aragón	BASED ON INDICATORS
País Vasco	
Navarra	
Source	Primary Care Service Package CSAP. SIAP-SNS.

Frequentation

For the SNS as a whole, according to SIAP data, in 2009 the average number of visits in family medicine was 5.6 consultations per inhabitant per year, the lowest figure being found in Cataluña (3.4) and the highest figure in Extremadura (8.6). In Figure 3.5, the disaggregated results by autonomous community are shown.

The SIAP data includes consultations taking place within normal working hours and is disaggregated by health area and by professional category; family medicine, paediatrics and nursing.

Figure 3.5 Frequentation by type of professional (mean number of consultations per inhabitant per year) 2009.



Notes	**AN**:Andalucía **AR**:Aragón **AS**:Asturias **BL**:Baleares **CA**:Canarias **CN**:Cantabria **CT**:Cataluña **CL**:Castilla y León **CM**:Castilla-La Mancha **CV**:Comunidad Valenciana **EX**:Extremadura **GL**:Galicia **MD**:Madrid **MR**:Murcia **NV**:Navarra **PV**:País Vasco **LR**:Rioja **IN**:INGESA (Ceuta and Melilla)
Source	Care Activity in Primary Care. SNS Summarized Report.

Catalogue of Primary Care Centres

The catalogue is structured according to functional criteria and it includes information about:

a) Name of the centre, its address, postal code, telephone number, town and municipality in which it is located.
b) Type of facility (health centre or local health facility).
c) Whether it is accredited as a teaching centre for postgraduate training (MIR) in the speciality of family and community medicine.
d) Whether it offers urgent care 24 hours a day.
e) Type of management structure (public, private, etc.).

The first organisational criterion is geography. This criteria has 2 levels of disaggregation: autonomous community and province.

The next territorial structure criterion used is the order according to the primary care health map of each autonomous community. This has basically two levels of disaggregation: health area and basic health zone. Within each basic health zone the centres are in order by type, in such a way that in rural settings all the physical centres organised functionally around a main centre (health centre) and that provide care to a population group delimited by the basic health zone are listed.

Then the names appear in alphabetical order, except in those cases in which an autonomous community has established its own ordering system, which is respected. Lastly, as the maximum level of disaggregation, the facilities are ordered by the name of the village or hamlet with no government structure of its own, since sometimes this is different from the municipality to which it belongs.

The Catalogue of Primary Care Centres[6] is updated quarterly and continual efforts are made to improve and expand the information provided.

Professional training activities: post-graduate training

In 2009 the SNS had 161 teaching units, to which 798 health centres with training accreditation are attached (only the main health centres in the basic zone are counted, although many of the local facilities that depend on that health centre also participate in training activities).[7] The breakdown by autonomous community appears in Table 3.9.

The number of places for post-graduate training in family and community medicine for the year 2009 was 1892. The autonomous community with the most places was Andalucía, with 305, followed by Cataluña, with 278 and Madrid, with 238.

[6] Ministry of Health and Social Policy. Catalogue of Primary Care Centres in the SNS.

Table 3.9 **Distribution of teaching units, health centres accredited to train and places offered for training in family and community medicine by autonomous community for 2009.**

AUTONOMOUS COMMUNITY	Teaching Units	Health Centres accredited to train	Places offered
Andalucía	8	129	305
Aragón	8	25	67
Asturias	8	33	56
Baleares	3	14	45
Canarias	7	26	70
Cantabria	3	12	37
Castilla y León	14	60	144
Castilla- La Mancha	8	34	98
Cataluña	17	89	278
Comunidad Valenciana	20	86	178
Extremadura	6	18	69
Galicia	7	45	88
Madrid	11	120	238
Murcia	4	33	82
Navarra	2	13	29
País Vasco	11	49	82
Rioja	1	5	20
Ceuta and Melilla	2	7	6
SNS	161	798	1.892

Source: Order SCO/2642/2008 of 15 September by the Ministry of Health and Consumer Affairs. Published in BOE Supplement no. 227.

Non-hospital urgent care

All autonomous communities have a specific organisation entrusted with co-ordinating the health care system's response to citizens with urgent care needs and health emergencies.

For this purpose, hotlines with easy-to-learn telephone numbers are available (the number 061 is specifically for health emergencies and it usually co-exists with 112, which is for any type of emergency). To attend the calls made to these numbers, and decide the most suitable response for the need expressed, there are **emergency co-ordination centres** (with a variety of different names) staffed by specifically-trained personnel, in operation 24 hours a day every day of the year.

The responses that can be given by these centres are basically the following:

— Resolve the problem by telephone, advising the caller about the proper course of action or informing him/her of which urgent-care site he/she should go to (health centre, dedicated urgent care service, or hospital emergency room).
— Activate the care network to attend the patient at home, either by mobilising the primary care network to visit the patient at home or by mobilising the resources of the call centres themselves to provide urgent home care.
— Activate mobile health transport resources, either non-medical ambulances for transporting the patient, after basic care is provided, to a health care facility, when necessary, or ambulances fitted with basic or advanced life support systems (mobile ICU with specialised health personnel and equipment).

— The use of rapid intervention vehicles is on the rise. These vehicles are designed mainly for providing care to patients *in situ*; they are equipped with supplies and personnel but do not have patient transport capabilities. Lastly, for patients who are in serious condition and are far away or in places difficult to access, medical helicopters are available.
— In catastrophe situations, the call centres act in conjunction with other services (Civil Protection services, fire fighters, etc.).

In addition, apart from the actions taken in response to the calls received at the numbers mentioned above, the entire **primary care network** – health centres (almost 3000) and local health facilities (about 10,000) – attends urgent care needs during normal working hours.

The hours of the health centres vary depending on how each autonomous community organises this service; some are open primarily in the morning and early afternoon and some are open in the morning and also all afternoon. The hours of the local health facilities are determined mainly by the size – the number of residents – of the town in which services are to be provided. Primary care centres also receive direct requests for urgent care to be provided off the premises (usually at the patient's home).

Outside of these normal working hours, response to non-hospital urgent care needs is concentrated in centres selected on the basis of accessibility and the size of the population attended. In general, there are two types of situations:

— Health centres (mostly in rural locations, although a few are urban) and some local health facilities (the latter only when the main health centre is difficult to access geographically) that stay open 24 hours a day, until the ordinary hours begin again, every day of the year. There are different names for these centres, although *Out of Hours Care Site* (*Punto de atención continuada (PAC))* is the most frequent. There are almost 1800 of them. Care is usually provided by the usual primary care team in rotating shifts, complemented to a greater or lesser extent by staff hired specifically to do so.
— Facilities with exclusive dedication to urgent care and attended exclusively by staff hired specifically for this purpose. They are located in urban settings and in general have opening hours that complement the hours of health centres, although in some cases they operate 24 hours a day, especially to respond to urgent care needs at patients' homes. These facilities may be located in a variety of places (health centres, specialised care centres or other types of health care facilities), and there exist a number of different names, the most frequent being *Servicio de Urgencias de Atención Primaria (SUAP), Servicios Normales de Urgencias (SNU), Servicios Especiales de Urgencias (SEU), Punto de Atención Urgente (PAU*), among others. While PACs always depend functionally on the structures that manage primary care, the other facilities described may depend on either primary care structures or on the emergency co-ordination centres.

3.2 Specialised care

Distribution of resources

According to the National Catalogue of Hospitals, at the beginning of 2009 the total number of hospitals functioning in Spain was 804 (hospitals grouped together as hospital complexes are counted as a single hospital). Of them, just over 40% belong to the SNS (these are the hospitals that depend on different levels of government). Among the remaining hospitals, however, several are considered part of the network of SNS hospitals as well (because they are included in the network of hospitals for public use or are hospitals that have signed long-term substitution agreements) or receive public funding for their activity. As a result, of all the private hospital discharges in Spain as many as 37% were funded by the SNS budget.

Almost all of the hospitals in the census contributed to the Statistical Study on Inpatient Medical Facilities (EESCRI), as they furnished their 2008 data concerning the facilities' resources, activities and expenditure. Also, all the acute care hospitals of the SNS, and a considerable proportion of private hospitals, add their hospital discharge records to the national Minimum Basic Data Set (MBDS), the statistical use of which is among the operations called for by the National Plan on Statistics, along with the EESCRI. The results of these operations for the year 2008 are the main source of data for this chapter.

Bed capacity

In 2008, the network associated with the public system offered 71.8% of the total of 160,981 beds, the ratio being 3.53 beds for every 1000 inhabitants for the sector as a whole.

As regards their distribution, the public sector manages the majority of the beds for acute patients (81%), while the proportion is almost the opposite in the case of psychiatric hospitals (37% of the beds) and long-term care hospitals (32% of the beds).

Distribution by autonomous community is shown in the following table (Table 3.10).

The evolution in the number of beds in recent years (Table 3.11) continues to display the downward trend that has been visible since the 1980s, although the decrease is not generalised if the use of the beds and the system to which they belong are also analysed. The decline in the number of beds is more pronounced in public hospitals, mainly due to the reduced number of beds in psychiatric hospitals.

In the private sector, while acute care hospitals have also seen a reduction in their number of beds (of over 4% between 2000-2008), the number of beds in geriatric and long-term care hospitals increased during the same period.

As for other hospital features, the network of SNS hospitals has most of the 2755 incubators existing in Spain, the proportion being 5 to 1 with respect to the private hospitals, while such predominance is smaller when it comes to operating rooms (2 to 1) and delivery rooms, where the ratio is 3 to 1 in favour of the public sector. The number of SNS operating rooms (2705 in 2008) has increased by more than 16% since 2000 in the public sector, while there was little or no growth in the private sector.

Table 3.10 Distribution of bed capacity by autonomous community. SNS hospitals. 2008.

	Number	Number beds / 1000 pop.	% SNS beds of total beds
Andalucía	16,555	2.04	75.03%
Aragón	4,461	3.41	80.83%
Asturias	3,415	3.22	81.02%
Baleares	2,415	2.28	66.29%
Canarias	4,708	2.28	62.57%
Cantabria	1,498	2.61	67.91%
Castilla y León	7,246	2.89	76.70%
Castilla- La Mancha	5,117	2.56	90.61%
Cataluña	18,248	2.51	58.12%
Comunidad Valenciana	10,386	2.10	80.62%
Extremadura	3,975	3.68	90.16%
Galicia	8,542	3.12	81.50%
Madrid	15,767	2.52	71.85%
Murcia	3,022	2.11	64.49%
Navarra	1,394	2.28	58.01%
País Vasco	5,816	2.72	69.54%
Rioja	827	2.64	86.51%
Ceuta Melilla	385	2.72	100.00%
Total	113,777	2.5	71.93%

Source MSPSI. Statistical Study on Inpatient Medical Facilities 2008.

Table 3.11 Evolution in number of beds by sector and function. 2000-2008.

	Public – SNS									Ratio
HOSPITALS	2000	2001	2002	2003	2004	2005	2006	2007	2008	08/00
Acute care	105,532	103,582	102,587	103,159	102,421	101,689	102,386	102,854	103,488	-1.9%
Psychiatric	7,563	7,225	6,912	6,396	6,319	5,926	5,832	5,690	5,754	-23.9%
Long-term care	4,342	3,957	3,692	3,888	4,087	4,282	3,909	4,231	4,535	4.4%
TOTAL	117,437	114,764	113,191	113,443	112,827	111,897	112,127	112,775	113,777	-3.1%
	Private									
HOSPITALS	2000	2001	2002	2003	2004	2005	2006	2007	2008	08/00
Acute care	26,839	26,407	26,843	24,762	24,941	24,889	25,121	25,852	25,626	-4.5%
Psychiatric	10,388	10,436	10,758	10,625	10,673	11,216	10,918	10,229	9,477	-8.8%
Long-term care	8,227	8,184	8,319	8,646	9,627	9,143	9,352	9,450	9,290	12.9%
TOTAL	45,454	45,027	45,920	44,033	45,241	45,248	45,391	45,531	44,393	-2.3%

Source MSPSI. Statistical Study on Inpatient Medical Facilities. 2008.

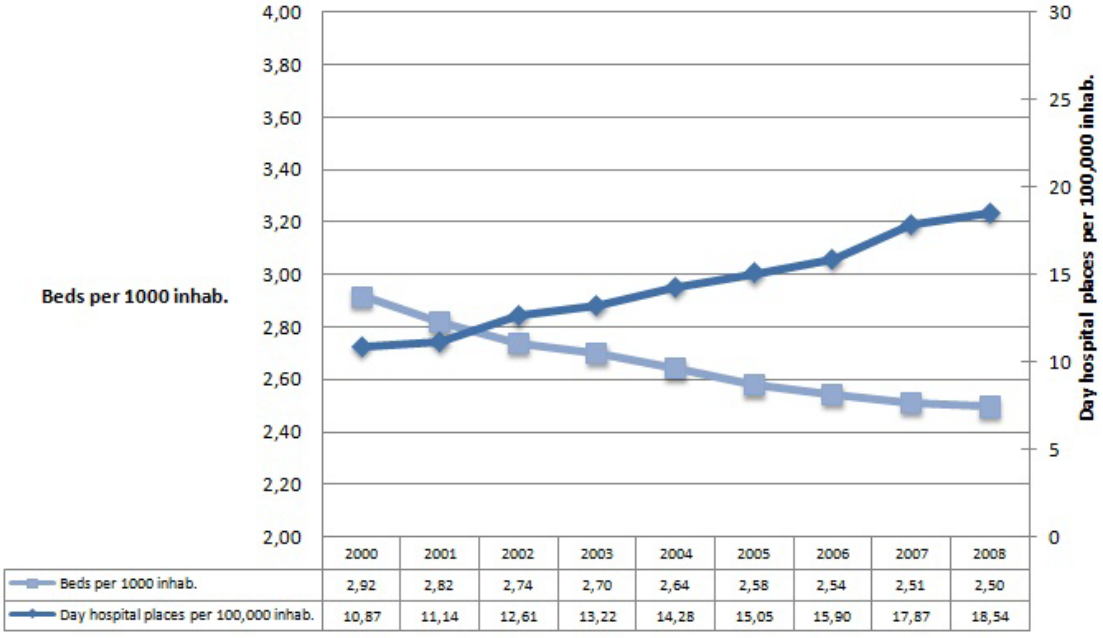
Day hospital places

Reflecting the progressive shift towards ambulatory specialised care, which means that procedures previously requiring hospital admission are now being performed in activity areas without overnight stay, the number of day hospital places has increased very significantly in recent years, in a trend opposite to the one shown by bed capacity (Figure 3.6). This increase is found in both absolute numbers and in rates per 1000 inhabitants.

In absolute numbers, since 2000 the public sector has doubled its number of day hospital places, which has gone from 4375 in 2000 to over 8475 in 2008; in private hospitals the figure has also doubled, although the initial figure was only 1200 places and

the figure at the end of 2008 was 2518. It should be noted that the type of hospital in which the increase in day hospital places was most significant was long-term care hospitals. This reflects the pronounced trend towards ambulatory care and the de-institutionalisation of the problems related to so-called long-term care, which requires specific support and rehabilitation structures for this type of patient.

Figure 3.6 **Evolution in number of beds and day hospital places in SNS hospitals. 2000-2008.**



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Beds per 1000 inhab.	2,92	2,82	2,74	2,70	2,64	2,58	2,54	2,51	2,50
Day hospital places per 100,000 inhab.	10,87	11,14	12,61	13,22	14,28	15,05	15,90	17,87	18,54

Source MSPSI. Statistical Study on Inpatient Medical Facilities 2000-2008.

Technological equipment

Of all the different types of material resources, advanced technology medical equipment is the type that has experienced the most significant increase in recent years. Within such equipment, magnetic resonance imaging is the type with the most spectacular variations. In 2000, public facilities had only 61 NMR units, and in 2008, the number of units counted was 170, which represents an increase of 178%. The rate for that year reached 3.7 units for every one million inhabitants. Secondly, with regard to Computerised Axial Tomography (CAT) technology, the number of available units in public hospitals rose by 41%, increasing from 310 to 438, which means there are 9.61 units for every one million inhabitants. Table 3.12 shows the distribution of these types of equipment and also that of digital angiography and haemodynamic facilities, by autonomous community.

Table 3.12 **Distribution of technological equipment by autonomous community. SNS hospitals. 2008.**

	Haemodynamic facilities		CAT units		Magnetic Resonance Imaging		Digital Angiography	
	Number	Units x 1M Inhab.	Number	Units x 1M Inhab.	Number	Units x 1M Inhab.	Number	Units x 1M Inhab.
Andalucía	23	2.84	77	9.50	20	2.47	19	2.34
Aragón	2	1.53	15	11.48	6	4.59	3	2.30
Asturias	2	1.89	13	12.27	7	6.61	3	2.83
Baleares	2	1.89	8	7.56	4	3.78	2	1.89
Canarias	7	3.40	16	7.76	3	1.46	10	4.85
Cantabria	2	3.49	6	10.46	3	5.23	3	5.23
Castilla y León	6	2.39	22	8.78	7	2.79	5	1.99
Castilla - La Mancha	5	2.50	26	12.99	10	5.00	5	2.50
Cataluña	29	3.99	61	8.39	25	3.44	13	1.79
Comunidad Valenciana	13	2.63	46	9.29	14	2.83	13	2.63
Extremadura	5	4.63	17	15.74	7	6.48	2	1.85
Galicia	10	3.65	31	11.32	15	5.48	14	5.11
Madrid	27	4.32	56	8.97	38	6.08	25	4.00
Murcia	3	2.10	14	9.78	4	2.80	5	3.49
Navarra	1	1.64	6	9.83	2	3.28	2	3.28
País Vasco	6	2.81	20	9.35	3	1.40	11	5.14
Rioja	0	0.00	2	6.37	2	6.37	1	3.19
Ceuta and Melilla	0	0.00	2	14.11	0	0.00	0	0.00
Total	143	3.14	438	9.61	170	3.73	136	2.98

Source MSPSI. Statistical Study on Inpatient Medical Facilities 2008.

Human resources

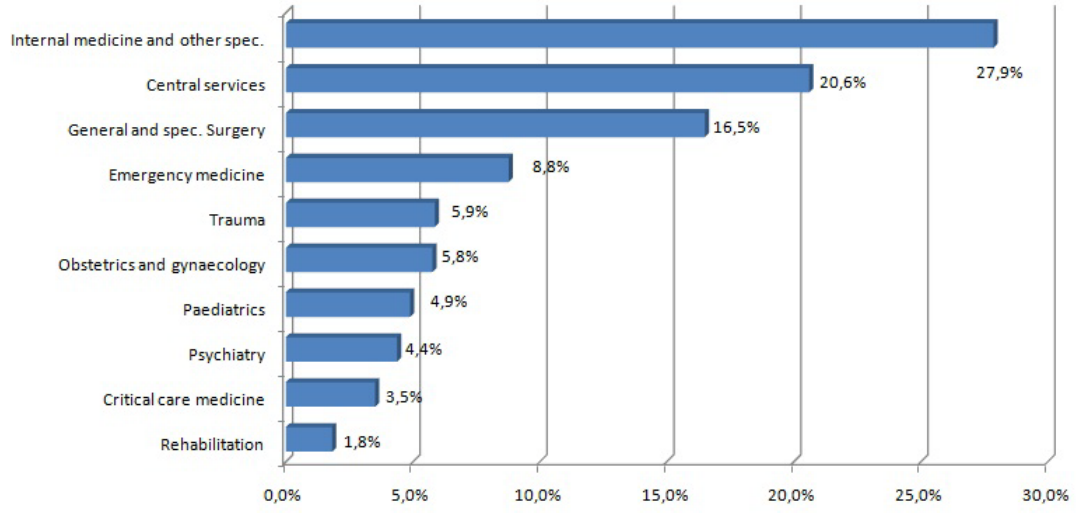
The hospital sector employs the majority of Spain's health professionals (80%). As of 31 December 2008, there were 507,181 professionals working in the sector with a contract, whether as government employees, statutory employees, or with regular employment contracts, either full or part time, excluding personnel receiving postgraduate training. Of them, 72% were women. Also, a total of 23,324 people were working as frequent collaborators (workers without a government, statutory or regular employment contract with the centre at which they provide services).

Four out of five employees in the hospital sector in this country work for the network of SNS hospitals, which employs 436,837 contracted professionals. Of them three quarters belong to a health profession, the largest category being that of nursing. Thus, out of every 100 health professionals, 39 are nurses, 37 are health care assistants[8] and 22 are medical professionals.

Ten out of eleven physicians working in the hospital sector are employed by the public network, although some of them also work at private hospitals. By area of specialisation, specialists in internal medicine and other medical specialities, including critical care, represent almost one third of all medical professionals (31.4%), while general surgery and specialised surgery specialists, including those belonging to traumatology and orthopaedics and obstetrics-gynaecology represent 28%. The rest are physicians who work in central services (the specialised services that support other clinical activities, such as radiology, laboratory, hospital pharmacy, anatomical pathology) (20.6%), emergency departments (8.8%) and others (Figure 3.7).

[8] Includes nursing assistants and technical assistants

Figure 3.7 Distribution of doctors by speciality. SNS hospitals. 2008.



Source MSPSI. Statistical Study on Inpatient Medical Facilities 2008.

As to the sector's evolution, since 2000 the number of professionals attached to the SNS has grown by 30%, and in the specific case of doctors, the figure is 41%.

Activity

Of the total of 5.3 million admissions that took place in 2008, almost four million (3,925,332) were to SNS hospitals, which means that frequentation in this sector is 90 admissions per 1000 inhabitants. Likewise, it was in the public sector where most of the specialised care consultations took place (86% out of a total of 77 million in 2007), and hospitals belonging to the SNS network attended 80% of the 26.2 million hospital-attended emergencies. The only activity in which the public sector did not show such an overwhelming majority was surgery, where of the 4.6 million operations performed, almost one third took place in a private hospital. However, more than 30% of the major outpatient surgery performed in private hospitals during that year was publicly funded, a clear indication of the role that this arrangement can play as a complementary resource in health care.[9]

The average length of stay for patients admitted to public hospitals was 7.9 days. This figure, often considered an indicator of efficiency, has decreased over the period analysed, especially in acute care hospitals. This reduction represents a savings of almost 0.75 day in terms of the length of the hospital stay of each patient admitted.

However, the most notable reduction observed in the average stay occurs in acute care hospitals, and it is accompanied by an increase in the rotation index (number of patients who have occupied the same bed during the year) and by an increase in the occupation index, which has made possible a considerable increase in activity, since, as mentioned above, the number of beds in the public sector has fallen by 2% (Table 3.13).

[9] Public funding: includes activity funded by "the Social Security system", "Companies that collaborate with Social Security", "Other Public Bodies", "Insurance Mutuals for Government Employees" and "Others".

Table 3.13 Evolution of activity indicators. SNS acute care hospitals. 2000-2008.

	Discharges	Average length of stay	Occupation Index	Rotation Index
2000	3,562,755	7.77	79.92 %	37.54
2001	3,577,249	7.67	80.03 %	38.11
2002	3,623,614	7.68	81.49 %	38.75
2003	3,721,126	7.59	82.37 %	39.61
2004	3,759,423	7.48	81.95 %	40.00
2005	3,782,522	7.46	82.37 %	40.30
2006	3,817,283	7.38	81.34 %	40.25
2007	3,890,256	7.37	81.87 %	40.55
2008	3,929,578	7.21	80.92%	40.98

Source MSPSI. Statistical Study on Inpatient Medical Facilities 2008.

Causes of hospitalisation

With regard to the main causes of hospitalisation, Table 3.14 shows, by sex, the distribution of the main diagnoses at discharge, of the almost four million cases of hospitalisation, classified by chapters of the ICD-9-CM.[10] Of all of them, problems related to pregnancy, childbirth and the post-natal period, with almost 520,312 discharges in this category, occupy the first position, closely followed by diseases of the circulatory system, with 512,982 discharges, which represents 13.7% of the total. Diseases of the digestive system and of the respiratory system, with 11.9% and 11.6%, respectively, occupy third and fourth place, while fifth place is occupied by neoplasm's which, with almost 346,000 discharges, represent over 9% of the total. It is important to note that avoidable conditions, such as injuries and poisonings, occupy the sixth position and in 2008 they represented more than 303,000 discharges (8.1% of the total).

The area of obstetrics, the most frequent cause of hospitalisation, is among the areas showing the greatest increase in activity during this decade. The number of births attended in 2008 was 514,114 for the hospital sector as a whole; of them (402,086 – 78%) took place in SNS hospitals (28% more than in 2000, when 313,452 births were attended). Attending normal births is thus the most frequently performed individual process[11] with over 223,000 discharges (6% of the total) (Table 3.15). However, it must be highlighted that the number of caesarean sections has also increased notably both numerically and in proportion to the total number of births; while in 2000 the number of caesareans performed was 61,146 (19.5% of the total of births), in 2008 over 87,833 caesareans were performed (21.8% of births), which means that this intervention is the most frequently performed surgical procedure[12] in SNS hospitals (Table 3.16). It should be mentioned that the percentage of caesarean deliveries is much higher in private hospitals, where almost 36% of the deliveries are caesarean.

[10] International Classification of Diseases, 9th Revision, Clinical Modification, the classification system used in the SNS for clinical coding, for purposes of statistical analysis of diseases treated.

[11] Classified according to the Diagnosis Related Groups (DRG) – AP DRG version 23.

[12] Classified according to the Diagnosis Related Groups (DRG) – AP DRG version 23

Table 3.14 **Distribution of discharges by main causes of hospitalisation. SNS acute care hospitals. 2008.**

	Women		Men		TOTAL		
	Discharges	x 10,000 inhab.	Discharges	x 10,000 inhab.	Discharges	x 10,000 inhab.	Percentage of total
Infectious and parasitic diseases	29,762	12.89	41,776	18.56	71,541	15.7	1.91 %
Neoplasms	161,385	69.92	184,957	82.16	346,367	76.0	9.27 %
Endocrine, nutritional and metabolic diseases and immunity disorders	38,421	16.65	28,532	12.67	66,954	14.7	1.79 %
Diseases of the blood and blood-forming organs	18,508	8.02	17,572	7.81	36,081	7.9	0.97 %
Mental disorders	35,505	15.38	42,374	18.82	77,887	17.1	2.08 %
Diseases of the nervous system and sense organs	57,091	24.74	59,367	26.37	116,466	25.5	3.12 %
Diseases of the circulatory system	224,299	97.18	288,661	128.22	512,982	112.5	13.73 %
Diseases of the respiratory system	172,816	74.87	260,451	115.69	433,286	95.0	11.60 %
Diseases of the digestive system	192,611	83.45	249,935	111.02	442,562	97.1	11.85 %
Diseases of the genitourinary system	118,842	51.49	97,473	43.30	216,331	47.4	5.79 %
Complications of pregnancy, childbirth and the post-natal period	520,234	225.39			520,312	114.1	13.93 %
Diseases of the skin and cutaneous tissue	16,513	7.15	19,685	8.74	36,201	7.9	0.97 %
Diseases of the musculo-skeletal system and connective tissue	105,742	45.81	82,581	36.68	188,328	41.3	5.04 %
Congenital anomalies	14,304	6.20	20,002	8.88	34,312	7.5	0.92 %
Certain conditions originating in the perinatal period	30,648	13.28	37,341	16.59	68,013	14.9	1.82 %
Symptoms, signs and ill-defined conditions	69,746	30.22	82,907	36.83	152,659	33.5	4.09 %
Injuries and poisonings	144,413	62.57	159,412	70.81	303,849	66.6	8.13 %
Appendix I, Supplementary classification of factors influencing the state of health and contact with health services	46,258	20.04	49,055	21.79	95,331	20.9	2.55 %
Others	7,956	3.45	8,517	3.78	16,483	3.6	0.44 %
TOTAL	2,005,054	868.70	1,730,598	768.73	3,735,945	819.4	100%

Notes Discharges in which the sex code was erroneous or left blank were excluded.

Source MSPSI. Discharge Register – Minimum Basic Data Set (MBDS) 2008.

The pattern of diseases attended and also the profile of the care provided undergo changes in response to factors such as the ageing of the population, which explains why the average age of hospitalised patients has risen from 48 to 53 years over the past decade.[13] Also, the greater accessibility of the services and changes in the population's habits regarding the use of health services can be seen in the extraordinary growth in hospital-attended emergencies, parallel to growing emergency room pressure, which results in almost 70% of admissions being urgent (3% more than in 2000). Finally,

[13] Discharge Register - MBDS. MSPSI.

modifications in hospitalisation criteria, influenced by the evolution of diagnostic and therapeutic techniques, have led to a shift in activity towards alternatives to hospitalisation. These include major outpatient surgery, day hospital and the extension of home hospitalisation.

Table 3.15 List of 25 most frequent processes involving hospitalisation. SNS hospitals. 2008.

Code	Description	Discharges	Percentage of total
373	Childbirth without complications	223,707	5.99%
541	Simple pneumonia and other respiratory disorders, exc, bronchitis and asthma with major CC	111,719	2.99%
372	Childbirth with complications	94,037	2.52%
127	Cardiac insufficiency and shock	63,996	1.71%
371	Caesarean without complications	57,250	1.53%
87	Pulmonary oedema and respiratory insufficiency	41,453	1.11%
544	CHF and cardiac arrhythmia with major CC	40,300	1.08%
14	Stroke with infarction	40,133	1.07%
629	Newborn with birth weight >2499 g, without significant OR proc,, normal newborn diagnosis	39,966	1.07%
209	Major joint and limp reattachment proc, of lower extremity, except hip, without CC	36,460	0.98%
381	Abortion with dilation and curettage, aspiration or hysterotomy	35,478	0.95%
359	Uterine/adnexa proc, for CA in situ and non-malignant without CC	34,368	0.92%
430	Psychosis	34,005	0.91%
162	Proc, on inguinal and femoral hernia age >17 without CC	33,786	0.90%
494	Laparoscopic cholecystectomy without bile conduct exploration without CC	33,146	0.89%
88	Chronic obstructive pulmonary disease	32,950	0.88%
818	Hip replacement except for complications	31,864	0.85%
886	Other antepartum diagnoses without OR procedure	29,621	0.79%
89	Simple pneumonia and pleuritis age>17 with CC	26,253	0.70%
219	Lower extremity and humerus procedure exc, hip, foot and femur, age >17 without CC	26,072	0.70%
158	Anal and stomal procedures without CC	24,673	0.66%
167	Appendectomy without complicated principal diagnosis without CC	24,419	0.65%
	Subtotal first 25 processes	*1,115,656*	*29,86%*
	TOTAL SNS	**3,735,945**	**100,0%**

Notes	CC: comorbidity and/or complications. * Classified according to the Diagnosis Related Groups (DRG) – AP DRG version 23
Source	MSPSI. Discharge Register – MBDS 2008.

Starting in 2005 the discharge register (MBDS) has widened its boundaries to include these areas of ambulatory activity, mainly outpatient surgery, making it possible to study use patterns and care processes in these types of care. This is reflected, in 2008, in the 15 most frequent ambulatory surgical procedures. For the procedures discussed (Table 3.17), the substitution rate (percentage of ambulatory procedures in the total number of procedures) was 77.69%. In other words, three out of four interventions of this type (all together these 15 most frequent ambulatory surgical procedures totalled 879,245) were performed on outpatients.

Table 3.16 Most frequent surgical processes in hospitalisation. SNS Hospitals. 2008.

Code	Description	Discharges	Percentage of total
371	Caesarean without complications	57,250	4.28 %
209	Major joint and limp reattachment proc. of lower extremity, except hip, without CC	36,460	2.73 %
381	Abortion with dilation and curettage, aspiration or hysterotomy	35,478	2.65 %
359	Uterine/adnexa proc. for CA in situ and non-malig without CC	34,368	2.57 %
162	Proc. on inguinal and femoral hernia age >17 without CC	33,786	2.53 %
494	Laparoscopic cholecystectomy without bile conduct exploration, without CC	33,146	2.48 %
818	Hip replacement except for complications	31,864	2.38 %
219	Lower extremity and humerus procedure exc. hip, foot and femur, age >17 without CC	26,072	1.95 %
158	Anal and stomal procedures without CC	24,673	1.85 %
167	Appendectomy without complicated principal diagnosis without CC	24,419	1.83 %
311	Transurethral procedures without CC	23,396	1.75 %
55	Miscellaneous ear, nose, mouth and throat procedures	22,727	1.70 %
211	Hip and femur procedures except major joint, age >17 without CC	21,581	1.61 %
160	Hernia procedure except inguinal and femoral age >17 without CC	19,745	1.48 %
370	Caesarean without complications	19,416	1.45 %
	Sum:	**444,381**	**33.25 %**
	Total sum:	**1,336,338**	**100.00 %**

Notes: CC: comorbidity and/or complications.
* Major surgery discharges classified according to Diagnosis Related Groups (DRG) – AP DRG ver. 23

Source: MSPSI. Discharge register for SNS Hospitals. MBDS 2008.

Table 3.17 Most frequent ambulatory surgical procedures.* SNS hospitals. 2008.

Code	Description	Outpatient cases	Inpatient cases	Substitution rate
39	Lens procedures with or without vitrectomy	239,993	11,230	95.53 %
270	Other skin, subcutaneous tissue and breast procedures without CC	144,014	8,626	94.35 %
40	Extraocular procedures except orbit, age >17	42,191	4,204	90.94 %
42	Intraocular procedures except retina, iris and lens	34,232	7,163	82.70 %
266	Skin graft and/or debridement except for skin ulcer, cellulitis without CC	29,665	6,524	81.97 %
6	Carpel tunnel release	26,433	2,555	91.19 %
162	Proc. on inguinal and femoral hernia age >17 without CC	24,575	33,786	42.11 %
225	Foot procedures	22,263	17,915	55.41 %
359	Uterine/adnexa proc. for CA in situ and non-malig without CC	21,358	34,368	38.33 %
229	Hand and wrist procedures, except major joint proc. without CC	19,115	13,042	59.44 %
119	Vein ligation and stripping	19,087	13,633	58.33 %
55	Miscellaneous ear, nose, mouth and throat procedures	16,260	22,727	41.71 %
364	Dilation and curettage, conization except for malignant neoplasm	15,090	4,921	75.41 %
867	Local excision and removal of internal fixation devices except hip and femur without CC	14,727	15,281	49.08 %
342	Circumcision age >17	14,055	212	98.51 %
	Subtotal 15 most frequent ambulatory surgical procedures.	**683,058**	**196,187**	**77.69 %**
	TOTAL SURGICAL CASES	**907,983**	**1,368,848**	**40.46 %**

Notes: CC: comorbidity and/or complications.
* Classified according to the Diagnosis Related Groups (DRG) – AP DRG version 23

Source: MSPSI. Discharge Register (MBDS) and Register of Specialised Ambulatory Care 2008

Reference Centres, Services and Units

In the SNS, Reference Centres, Services and Units (CSUR) are being designated as a means to guarantee equitable access and high-quality, safe and efficient care for patients with pathologies that are infrequent or that require highly specialised care or care involving advanced technology. These CSUR group together cases to be treated and the necessary resources in a limited number of facilities.

The CSUR-SNS project, which is being carried out by the Ministry of Health, Social Policy and Equality and the autonomous communities, is based on the provisions of Royal Decree 1302/2006, which lays down the basic procedures for designating and accrediting the Reference Centres, Services and Units of the SNS. This decree created the CSUR designation committee, which is answerable to the CISNS, as the body that would take charge of the CSUR designation processes. It was constituted on 28 November 2006 and is comprised of representatives of all the autonomous communities and the MSPSI.

According to the established procedure, expert groups in each area of specialisation (designated by the autonomous communities, scientific societies and the Ministry of Health, Social Policy and Equality) submit proposals to the designation committee with the aim of determining which pathologies and techniques should be referred to CSUR and they also decide upon the requirements that potential reference facilities must meet in order to be designated as such. The different areas of specialisation are being studied gradually, in the order of priorities established by the committee, due to the impossibility of all expert tasks being performed at the same time.

Since July of 2007, the CISNS has agreed on 42 pathologies or procedures for which it is necessary to designate CSUR in the SNS, and also the requirements that must be fulfilled by such facilities in the areas of ophthalmology; medical and radiotherapeutic oncology; plastic, reconstructive and cosmetic surgery; traumatology and orthopaedics; cardiology and heart surgery; neurology, neurophysiology and neurosurgery; care for transsexuals; and transplants.

In 2009 the committee worked with groups of experts in cardiology and heart surgery and in the neurosciences, to define the pathologies and procedures within these areas for which CSUR need to be designated and the criteria that the centres must meet. Also, the group of experts in spinal injuries has started its work.

In 2009 a total of 68 designated CSUR began to function as such; 40 of them started on 1st of January and the remaining 28 started on 1st of July (Table 3.18). The distribution of CSUR in 2009 appears in Table 3.19.

The designation committee, at its meeting on 1 December 2009, made a preliminary assessment of 88 new applications by CSUR candidates; the applications admitted for further study were forwarded to the Quality Agency, which will decide whether to give them accreditation. It also studied the documentation and reports pertaining to the possible accreditation of 30 other units, with proposals for designation of 22 new CSUR being forwarded to the CISNS.

To make the designation of the CSUR effective and to be able to fund the health care provided to cases referred from other autonomous communities, Ministerial Order SAS/3351/2009, of 10 December 2009, was put into effect, updating Annex III of Royal Decree 1207/2006, of 20 October 2006, which regulates the management of the Health Cohesion Fund.

Table 3.18 Pathology, technique, technology or procedure attended by CSUR. 2009.

	Number of CSUR
1. Critical burns	7
2. Outer ear reconstruction	1
3. Congenital glaucoma and childhood glaucoma	2
4. Congenital alterations in ocular development (alterations in eyeball and eyelids)	1
5. Extraocular tumours in childhood (Rhabdomyosarcoma)	3
6. Intraocular tumours in childhood (Retinoblastoma)	4
7. Intraocular tumours in adults (uveal melanomas)	3
8. Orbital decompression in thyroid-associated ophthalmopathy	1
9. Orbital tumours	4
10. Advanced retinopathy of prematurity	1
11. Complex reconstruction of ocular surface Keratoprosthesis	9
14. Treatment of germinal tumours with intensive chemotherapy	1
15. Kidney transplant - children	5
16. Liver transplant - children	4
17. Live donor liver transplant - adults	2
18. Lung transplant - children and adults	6
19. Cardiopulmonary transplant - adults	2
20. Heart transplant in children	2
21. Pancreas transplant	6
22. Bowel transplant - children and adults	2
23. Penetrating keratoplasty - children	2
Total	68

Source D.G. Professional Regulation, Cohesion in the SNS and Executive Inspection (MSPSI).

An information system for monitoring the CSUR is now being defined. It has two components:

A. The Information System of the Health Cohesion Fund (SIFCO), which collects data on patients referred to other autonomous communities in order to monitor patient flows and motives for transfer to the CSUR and also to validate the prices set for the procedures or treatment.
B. The information system for specific monitoring of the CSUR, which makes use of the Patient Register of each CSUR to monitor the designation criteria related to its activity and also the procedure and outcome indicators included in the designation requisites defined by the CISNS.

To achieve better co-ordination in the design and development of the information system, to facilitate the monitoring of the CSUR, the procedure and outcome indicators initially defined by the expert groups have been revised. Professionals from these expert groups and by representatives of the existing CSUR proposed by the corresponding autonomous communities were in charge of such revision, which was carried out in working groups for the pathologies or procedures of each area of specialisation.

As a result of these tasks, the designation committee, at its meeting of 1 December 2009, adopted a proposal for an information system with which to monitor the CSUR for each of the pathologies or procedures which the CISNS has determined will be referred to the CSUR.

Table 3.19 Reference centres, services and units (CSUR) in the SNS. 2009.

DESIGNATED CSUR		Autonomous community
Critical burns	Hospital Vall D'Hebrón	Cataluña
	Complejo Hosp. Virgen del Rocío	Andalucía
	Hospital Universitario La Paz	Madrid
	Hospital Universitario de Getafe	Madrid
	Hospital Universitario La Fe	Comunidad Valenciana
	Complejo Hosp Universitario A Coruña	Galicia
	Hospital Universitario Miguel Servet	Aragón
Outer ear reconstruction	Hospital de Sant Joan de Déu	Cataluña
Congenital glaucoma and childhood glaucoma	Hospital de Sant Joan de Déu	Cataluña
	Complejo Hosp. Universitario de San Carlos	Madrid
Congenital alterations in ocular development (eyeball and eyelids)	Hospital Universitario La Paz	Madrid
Extraocular tumours in childhood (Rhabdomyosarcoma)	Hospital Vall D'Hebrón	Cataluña
	Hospital de Sant Joan de Déu	Cataluña
	Hospital Universitario La Paz	Madrid
Intraocular tumours in childhood (Retinoblastoma)	Hospital Vall D'Hebrón	Cataluña
	Hospital de Sant Joan de Déu	Cataluña
	Complejo Hosp. Virgen Macarena	Andalucía
Intraocular tumours in adults (uveal melanomas)	Hospital Clínico Universitario de Valladolid	Castilla y León
	Complejo Hosp. Universitario de Santiago	Galicia
	Instituto Catalán de Oncología and Hospital Universitario de Bellvitge	Cataluña
Orbital decompression in thyroid-associated ophthalmopathy	Hospital Universitario de Bellvitge	Cataluña
Orbital tumours	Hospital Vall D'Hebrón	Cataluña
	Hospital de Sant Joan de Déu	Cataluña
	Hospital Universitario de Bellvitge	Cataluña
	Hospital Ramón y Cajal	Madrid
Advanced retinopathy of prematurity	Hospital Universitario La Paz	Madrid
Complex reconstruction of ocular surface Keratoprosthesis	Hospital Vall D'Hebron	Cataluña
	Hospital Universitario de Bellvitge	Cataluña
	Hospital Clínico y Provincial de Barcelona	Cataluña
	Hospital Universitario Virgen de la Arrixaca	Murcia
	Complejo Hosp. Universitario de San Carlos	Madrid
	Hospital Clínico Universitario de Valladolid	Castilla y León
	Hospital General Universitario de Alicante	Comunidad Valenciana
	Complejo Hospitalario Universitario de Santiago	Galicia
	Hospital de Cruces	País Vasco
Treatment of germinal tumours with intensive chemotherapy	Hospital 12 de Octubre	Madrid
Kidney transplant in children	Hospital de Cruces	País Vasco
	Hospital Vall D'Hebron	Cataluña
	Complejo H. Virgen del Rocío	Andalucía
	Hospital Universitario La Paz	Madrid
	Hospital Universitario La Fe	Comunidad Valenciana
Liver transplant in children	Hospital Vall D'Hebron	Cataluña
	Hospital Universitario Reina Sofía	Andalucía
	Hospital Universitario La Paz	Madrid
	Hospital 12 de Octubre	Madrid
Live donor liver transplant - adults	Hospital Clínico y Provincial de Barcelona	Cataluña
	Hospital 12 de Octubre	Madrid
Lung transplant - children and adults	Hospital Universitario Marqués de Valdecilla for adult lung transplant	Cantabria
	Hospital Vall D'Hebron for adult and child lung transplant	Cataluña

	Hospital Universitario Reina Sofía for adult and child lung transplant	Andalucía
	Hospital Universitario Puerta de Hierro for adult lung transplant	Madrid
	Hospital Universitario La Fe for adult lung transplant	Comunidad Valenciana
	Complejo Hospitalario Universitario A Coruña for adult lung transplant	Galicia
Cardiopulmonary transplant - adults	Hospital Universitario Puerta de Hierro	Madrid
	Hospital Universitario La Fe	Comunidad Valenciana
Heart transplant - children	Hospital Universitario Reina Sofía	Andalucía
	Hospital General Universitario Gregorio Marañón	Madrid
Pancreas transplant	Hospital Clínico y Provincial de Barcelona	Cataluña
	Complejo Hospitalario Carlos Haya	Andalucía
	Hospital Universitario Reina Sofía	Andalucía
	Hospital 12 de Octubre	Madrid
	Hospital Universitario de Canarias	Canarias
	Complejo Hospitalario Universitario A Coruña	Galicia
Bowel transplant - children and adults	Hospital Universitario La Paz	Madrid
	Hospital 12 de Octubre	Madrid
Penetrating keratoplasty - children	Hospital de Sant Joan de Deu	Cataluña
	Hospital Universitario La Paz	Madrid

Source D.G. Professional Regulation, Cohesion in the SNS and Executive Inspection (MSPSI).

Transplants

The National Transplant Organisation

Introduction

Spain's National Transplant Organisation (hereinafter ONT, for Organización Nacional de Transplantes), created in 1989, is an autonomous body of a technical nature attached to the Ministry of Health, Social Policy and Equality, commissioned to perform the tasks related to obtaining and making clinical use of organs, tissues and cells.

Its main objective is to promote donation, so that all Spanish citizens in need of a transplant have the very best chances of obtaining it. Its general purposes are set forth in the ONT Statute (Royal Decree 1825/2009).[14]

To perform its functions, the ONT acts as an operational technical unit. It fulfils its mission to co-ordinate and facilitate the activities of donation, retrieval, preservation, distribution, exchange and transplant of organs, tissue and cells within the Spanish health care system, in accordance with principles of co-operation, efficiency and solidarity, and using the most current technical knowledge.

The legal framework that governs activities related to the procurement of human organs, their clinical use and territorial co-ordination of donation and transplant, is defined in Royal Decree 2070/1999[15] which (as does the previous Royal Decree 426/1980) implements the regulations set forth in Law 30/1979 on organ retrieval and transplant.[16] This law has been updated but its essence remains the same. It is grounded in the following fundamental concepts:

[14] Royal Decree 1895/2009 by which the Statute of the National Organ Transplant Organisation is adopted. [http://www.ont.es/infesp/Legislacin/REAL_DECRETO_ESTATUTO_ONT.pdf]

[15] Royal Decree 2070/1999 regulating activities related to the procurement of human organs, their clinical use and territorial co-ordination of the donation and transplant of organs and tissues. [http://www.ont.es/infesp/Legislacin/REAL_DECRETO_DONACION_Y_TRASPLANTE.pdf]

[16] Law 3070/1999 on organ retrieval and transplant. [http://www.ont.es/infesp/Legislacin/LEY_EXTRACCION_TRASPLANTE_ORGANOS.pdf]

1. It establishes brain death as the scientific, legal and ethical equivalent of the "classic" death of an individual.
2. The wishes of the deceased person as to whether or not to donate his/her organs are respected at all times.
3. The diagnosis of death must be made by a team of doctors independent from the transplant team.
4. Organ donation must always be an altruistic act, never the object of commercialisation.
5. Donor anonymity is guaranteed.
6. Medical criteria are applied in the distribution of available organs among the patients waiting for organs.

Structure and organisational model of organ donation and transplant

The scarcity of organs for transplant is the main limiting factor in these therapeutic techniques. Organ demand has grown exponentially as a result of the dramatic improvements in survival rates and the possibility of more and more patients benefiting from transplants. Various countries have adopted partial strategies that have had only slight, or temporary, effects on donation rates, or have had no effect whatsoever on donation. At the beginning of the 1990s, Spain launched a programme with an integrated approach to tackling the problem of organ scarcity, designed specifically to increase the number of deceased organ donors.

Among other measures, the ONT called for the creation of a national network of specially trained transplant co-ordinators, with a specific professional profile different from that used in other European countries. Since the creation of ONT, Spain has moved from the average-to-low segment of European donation rates, with 14 donors per million population (PMP), to the levels of 33-35 donors PMP that have been constant in recent years.

The *"Spanish Model"* is used to refer to the set of measures adopted in Spain to improve organ donation by deceased donors; it comprises a basic framework that is suitable from the legal, ethical, economic, medical and political perspectives. The basic characteristics of this model are:

1. A network of transplant co-ordinators with three levels: the national, regional and hospital levels.
   - Co-ordinators at the first two levels, who are designated and funded by the national and regional health administrations, serve as an interface between the political-administrative level and the professionals involved. All the technical decisions are made by consensus in a CISNS commission made up of the co-ordination heads at the national level and those of each of the autonomous communities.
   - The third level, the hospital co-ordinator, must be a physician (although he/she is always assisted by nursing staff in large hospitals), who almost always is devoted to transplant co-ordination on a part-time basis. This person works at the hospital and hierarchically is dependent on hospital management, not on the transplant team. From the functional perspective, this person works closely with the regional and national co-ordination bodies.

2. A quality programme in the organ donation process, involving continual observation of possible cases of brain death in intensive care units, performed by the transplant co-ordinators.
3. The ONT central office acts as a service agency in support of the entire system. It is in charge of the distribution of organs, transport arrangements, waiting list management, statistics, basic and specialised information and, in general, any action that may contribute to improving the donation and transplant process. The support given by the central office and the regional offices to small hospitals is very important, as these hospitals are unable to carry out the entire process on their own.
4. Great effort is devoted to ongoing training, for both co-ordinators and for a large part of health care personnel. There are specific and general courses on each of the steps in the process: donor detection, legal aspects, approaching families, organisational aspects, management, communication…
5. Hospitals are reimbursed by the regional governments, who pay specifically and appropriately for the activities related to organ procurement and transplant. If this were not the case, the activity could not possibly be maintained, especially in small hospitals that do not perform transplants habitually.
6. The ONT devotes a lot of time and energy to the media, with the aim of improving the population's understanding of donation and transplantation. Especially worth noting are: a hotline available 24 hours a day, regular meetings with journalists, courses on communication skills for co-ordinators, quick handling of negative publicity and crisis situations when they have arisen. All of this has contributed over the years to creating a positive attitude towards organ donation.
7. Suitable legislation, similar in technical terms to that of other Western countries, with a definition of brain death, the conditions of organ retrieval, the absence of economic gain, etc.

Hospital co-ordination teams for donation and transplants

The hospital co-ordination teams are the agents most closely involved in increasing the number of donations which in turn enables more transplants to be performed. They represent the key to the entire system. The recommendation is that in large hospitals with active transplant teams the co-ordination team should be formed by one doctor with part-time dedication and the same number of nurses as there are transplant programmes (kidney, liver, heart or lung). In the case of the nurses, dedication is full time, since their activities include support for the transplant teams. In small or medium-sized hospitals that do not have a transplant programme but do have an intensive care unit, the formula proposed is one doctor with part-time dedication, perhaps assisted by a nurse, depending on the potential capacity to generate donors.

In Spain it is considered indispensable that all hospitals have a doctor who is in charge of detecting and obtaining donors, basically because of the need to interact on equal terms with the medical team caring for the donor, the need to establish a proactive system for detecting cases of brain death and because it simplifies a great deal the training process in relation to the diagnosis of brain death, medical requisites and donor maintenance.

Professional profile of co-ordination teams

The number of co-ordination teams has grown from 139 in 1998 to 170 in 2009, with 227 doctors and 131 nurses. Their distribution by autonomous communities, dedication and professional profile can be seen in Table 3.20. Ninety-six per cent of the doctors and 70% of the nurses have part-time dedication to co-ordination tasks, and are thus able to continue with their previous activities. Of the doctors, 75% are specialists in Critical Care, while in the case of nurses the figure is 39%.

Table 3.20 Composition of the transplant co-ordination teams (January 2009).

--	Number of teams	Doctors	part-time	full-time	icu	neph.	other*	Nurses	part-time	full-time	icu	neph.	other*
Andalucía	19	24	24		23	1		14	8	6	6	3	5
Aragón	5	7	7		6	1		0					
Asturias	1	2	2		2			2	1	1	2		
Baleares	11	14	14		12		2	2	2		2		
Canarias	6	7	7		6	1		5	3	2	2	3	
Cantabria	1	1	1			1		2	1	1			2
Castilla y León	11	12	12		12			5	5		5		
Castilla-La Mancha	7	7	7		7			7	5	2	3		4
Cataluña	22	32	24	8	19	4	9	3	3		2		1
Comunidad Valenciana	23	37	37		26	1	10	38	35	3	9	5	24
Extremadura	8	8	8		5		3	3	1	2	3		
Galicia	11	23	22	1	14	1	8	6	5	1	2	1	3
Madrid	27	30	30		24	3	3	26	8	18	7	4	15
Murcia	6	5	5		5			7	7		2		5
Navarra	3	2	2		2			1		1			1
País Vasco	6	11	11		5		6	6	4	2	4	1	1
Rioja	1	3	3		2		1	4	4		2		2
Ceuta	1	1	1				1	0					
Melilla	1	1	1		1			0					
Total	**170**	**227**	**218**	**9**	**171**	**13**	**43**	**131**	**92**	**39**	**51**	**17**	**63**

Notes *Others include recovery, emergency medicine, anaesthesia, urology, surgery, management and others.

Source National Transplant Organisation (ONT) MSPSI.

Functions of co-ordination teams

The basic steps in the donation process (Figure 3.8) in which the co-ordinator must be involved, to a greater or lesser degree, are:

— ***Donor detection***. This is the most important point in the process. The primary cause of lost donors all over the world is the failure to detect potential donors, that is, patients who die or may die in a situation of brain death. Any other percentage of loss due to medical or legal reasons, non-consent by families or any other reason would be compensated by adequate detection. Between 12-14% of the patients who die in intensive care units, or, expressed in a different way, 2% of those who die in a large hospital, have entered a state of brain death. Finding significantly lower numbers of donors necessarily leads to the conclusion that detection is a problem.

— ***Maintenance***. Once the potential donor has been detected, suitable maintenance is extremely important and any incident that may cause organ deterioration or make donation impossible must be avoided. Lungs and heart are the organs most easily lost. Donor maintenance can be performed by a skilled critical care doctor but it requires intense dedication for the duration

of the process (which may last hours), both by the doctor and by nurses, and specific training on the characteristics of these individuals, who are still patients until the diagnosis of brain death is made.

— ***Diagnosis of death***. In all cases diagnosis must be made by three doctors other than those of the transplant team; the co-ordinator must only request collaboration and facilitate the task of the other doctors, who use the diagnostic procedures most suitable for each case, as provided by current legislation.

— ***Family consent***. Once the diagnosis of death is made, it may be necessary to obtain judicial authorisation in the case of death from external (non-medical) causes, and in all cases the family's authorisation is required. Although obtaining such consent is not specifically stipulated in Spanish legislation, doing so has become an indispensable practice as a result of society's attitude and that of quite a few judges in the early years of transplants. Each year, about 16 -18% of potential donor's families do not give their consent to donation. There are significant differences in the results obtained by well-trained co-ordination teams as compared to the results of teams that have not received adequate training in approaching families.

— ***Intrahospital logistics***. Once the authorisations and the death diagnosis have been obtained, intrahospital logistics must be prepared in order to proceed to the retrieval of organs; the ONT assigns the different organs to transplant teams according to criteria previously established and agreed by teams and regional authorities. A multi-organ extraction may involve up to 100 people, including medical professionals at different hospitals, staff at airports, ambulances, police, etc.; the co-ordinator plays a fundamental role in making sure everything goes smoothly.

— ***Attention to family members***. The work of the co-ordinator does not end when the donor's organs have been retrieved and preserved. The co-ordinator must be available to respond to any petitions made by the donor's family, and gratitude makes it a duty to ensure that the external appearance of the donor is returned as much as possible to normal, so that it is not immediately apparent that the extraction has taken place.

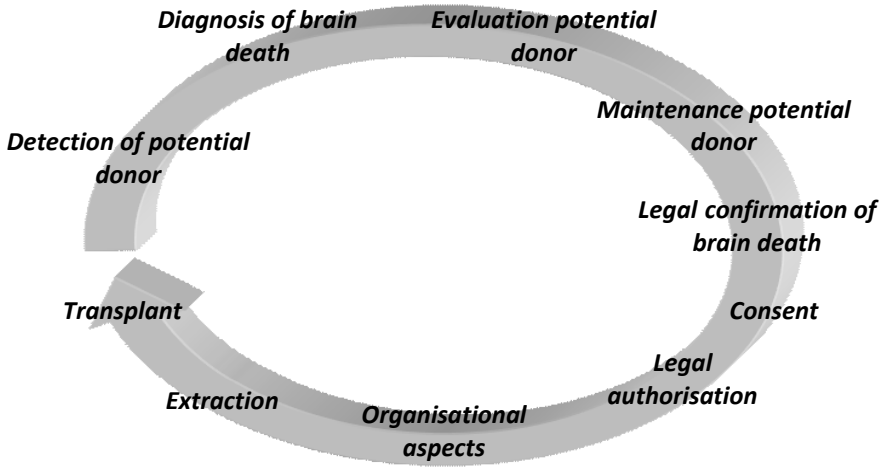
— ***Motivation of health professionals***. Transplantation is probably the best example of teamwork in which a large percentage of a hospital's professionals are involved every day; it is very important to be able to count on the collaboration of as many staff members as possible.

— ***Quality assurance programme.*** Its aims are to determine the hospital's theoretical organ donation capacity according to hospital type, to detect possible failures during the donation process, analysing the causes of potential donor losses and describing the hospital-related factors that have an impact on the donation process. Thanks to this type of monitoring, we know that from 12 to 14% of the persons who die in Intensive Care Units could potentially be donors and that half of them actually become donors. The quality assurance programme also allows for comparisons between hospitals, which give rise to numerous proposals for improvement.

— ***Maintenance and update of waiting lists***. In the large hospitals that perform transplants often, the co-ordination team usually helps to maintain and update the waiting lists, and to furnish the ONT with up-to-date information.

— ***Resource management.*** Donation is an act that encompasses numerous aspects, including legal, technical, ethical, mediatic, organisational and economic questions. The need to efficiently manage the resources that transplantation requires, to ensure that various centres act in a co-ordinated fashion and in accordance with ONT guidelines, means that the co-ordinating professionals have to assume additional management responsibilities. The co-ordinators are also *professionals of reference* for directors, other health professionals, journalists and the general population when it comes to addressing the various aspects that transplants touch upon every day. They play a primary role in *donation promotion* and in the *training* of new co-ordinators, other doctors and nurses, who ensure the viability and proper functioning of the system in years to come.

Figure 3.8 The donation and transplantation process.



Source National Transplant Organisation (ONT). MSPSI.

Transplant teams

In 2009, a total of 46 hospitals received authorisation to perform transplants, with transplant programmes for kidney, liver, heart, lung, pancreas, small bowel and others, as shown in Table 3.21.

Currently there are 44 kidney transplant teams in Spain (7 of them perform transplants in children and 37 in adults). Each team has a patient catchment area of 1.1 million. In the case of liver transplants there are 24 facilities, each with a catchment area of 1.9 million. In 2009 there were 18 facilities performing heart transplants (catchment area of 2.6 million) and 7 with an active programme for lung transplants (catchment area of 6.6 million).

Table 3.21 Network of transplant facilities / teams. 2009.

--	Kidney transplant teams (*)	Liver transplant teams (*)	Heart transplant facilities	Lung transplant facilities	Teams performing pancreas-kidney transplants and other combinations
Andalucía	6 (1)	4 (1)	2	1(1)	2
Aragón	1	1	1		
Asturias	1	1	1		
Baleares	1	1			
Canarias	2	1			1
Cantabria	1	1	1	1	1
Castilla y León	2	1	1		1
Castilla- La Mancha	2				
Cataluña	8 (2)	3 (1)	4	1(1)	2
Comunidad Valenciana	4 (1)	1 (1)	1	1(1)	1
Extremadura	1	1			
Galicia	2	2	1	1	2
Madrid	9 (2)	5 (2)	4	2	2(1)
Murcia	1	1	1		1
Navarra	1	1	1		
País Vasco	2 (1)	1			
Rioja					
Ceuta					
Melilla					
Total	**44 (7)**	**24 (5)**	**18**	**7 (3)**	**13 (1)**

Notes *Number in parentheses refers to teams that perform transplants in children.

Source National Transplant Organisation (ONT). MSPSI.

Donation and transplant activity 2009[17]

Organ donation

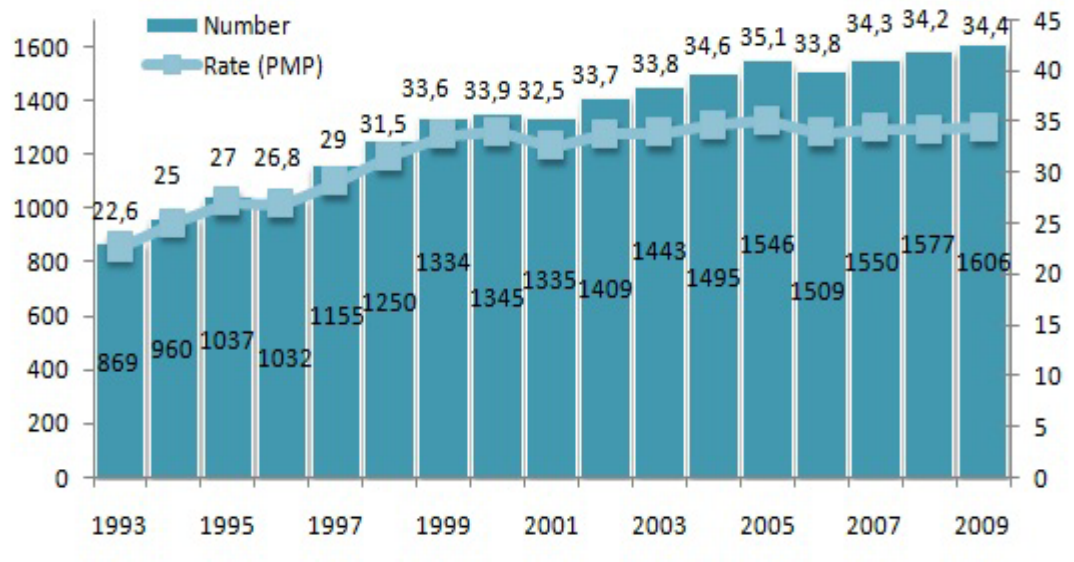
In 2009, there were 1606 organ donors in Spain, which represents a rate of 34.4 donors PMP (per million population). **Figure 3.9** shows the evolution of donation rates in Spain over recent years. These acts of donation enabled a total of 4028 solid organ transplant procedures to take place (2328 kidney transplants, 1099 liver transplants, 274 heart transplants, 219 lung transplants, 97 pancreas transplants and 11 bowel transplants).

Figure 3.10 presents data on donation in Spain as compared to other countries in recent years (2005-2009). Within the country there is also variability in the donation figures of the autonomous communities. The distribution of donors among the autonomous communities in 2009 appears in Figure 3.11, both in absolute values and in rates PMP.

As for the sociodemographic characteristics of the donors, average donor age in 2009 was 54.6 years, following the upward trend observed in previous years. Figure 3.12 shows the evolution of donors by age group. It can be seen that the group aged over 45 has gone from 57% in 1999 to almost 75% in 2009. Distribution by gender in 2009 remains similar to that of previous years, with approximately 61% of donors being men and 39% women.

[17] Report on donation and transplant activities. [http://www.ont.es/infesp/Paginas/Memorias.aspx]

Figure 3.9 **Total number and annual rate (PMP) of organ donors. Spain, 1993-2009.**

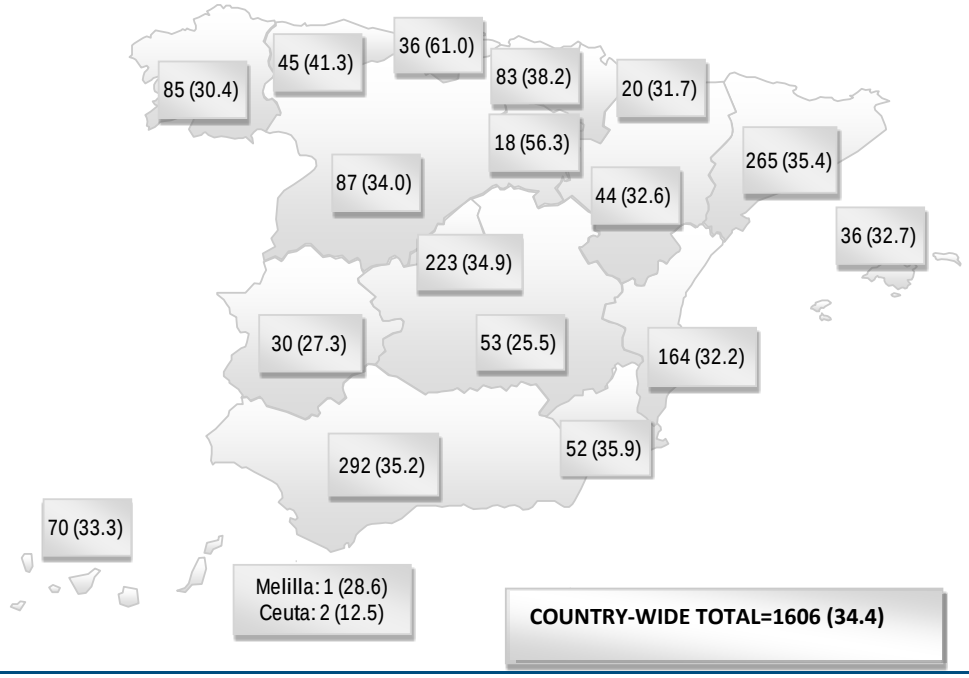


Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

Figure 3.10 **Annual rate (PMP) of organ donors in Spain compared to other countries (2005-2009).**

Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

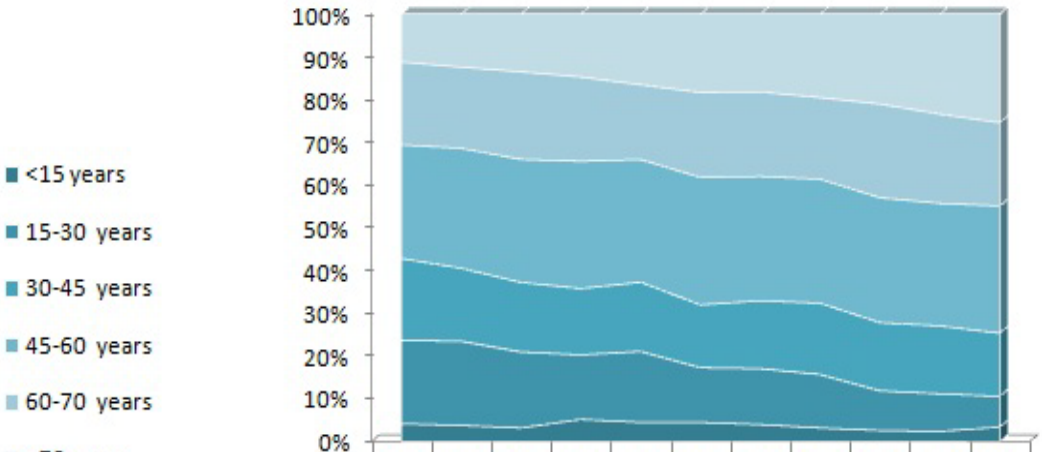
Figure 3.11 **Total organ donors by autonomous community and annual rate (PMP). Spain, 2009.**



Notes PMP: per million population

Source National Transplant Organisation (ONT). MSPSI.

Figure 3.12 **Organ donor age groups. Spain, 1999-2009.**

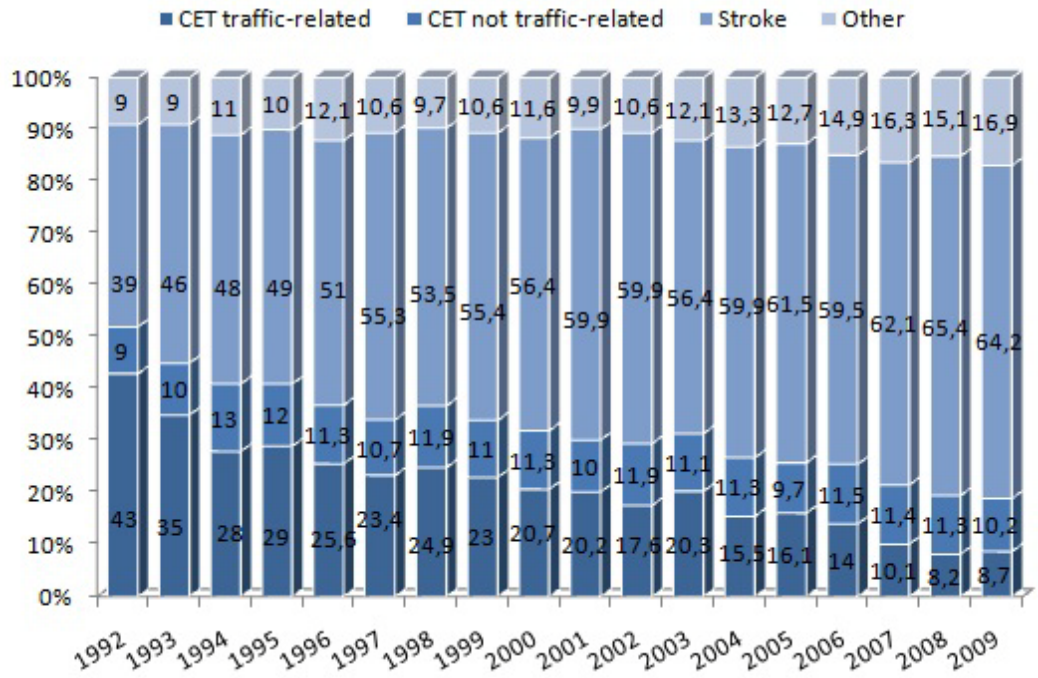


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
>70 years	11,2	12,4	13,5	14,7	16,5	18,3	18,2	19,5	21	23,4	25,4
60-70 years	19,4	19	20,5	19,7	17,5	19,9	19,8	19,1	21,9	20,9	19,5
45-60 years	26,6	28,1	28,8	29,8	28,7	29,8	29,1	29	29,2	28,7	29,8
30-45 years	19,2	17,1	16,3	15,5	16,2	14,7	15,9	16,7	15,9	15,9	14,8
15-30 years	19,5	19,7	17,8	15,1	16,6	12,8	13,1	12,5	9,3	8,8	7,2
<15 years	4,2	3,8	3,2	5,2	4,5	4,5	4	3,2	2,6	2,4	3,4

Source National Transplant Organisation (ONT). MSPSI.

The profile of donors in terms of the cause of death has also changed (Figure 3.13). Death from stroke has grown from 39% in 1992 to over 64% in 2009; donors dying from cranial-encephalic trauma due to traffic accident currently represent only 8.7% of the donors, whereas these cases accounted for 43% in 1992.

Figure 3.13 **Causes of death of organ donors. Spain, 1992-2009.**

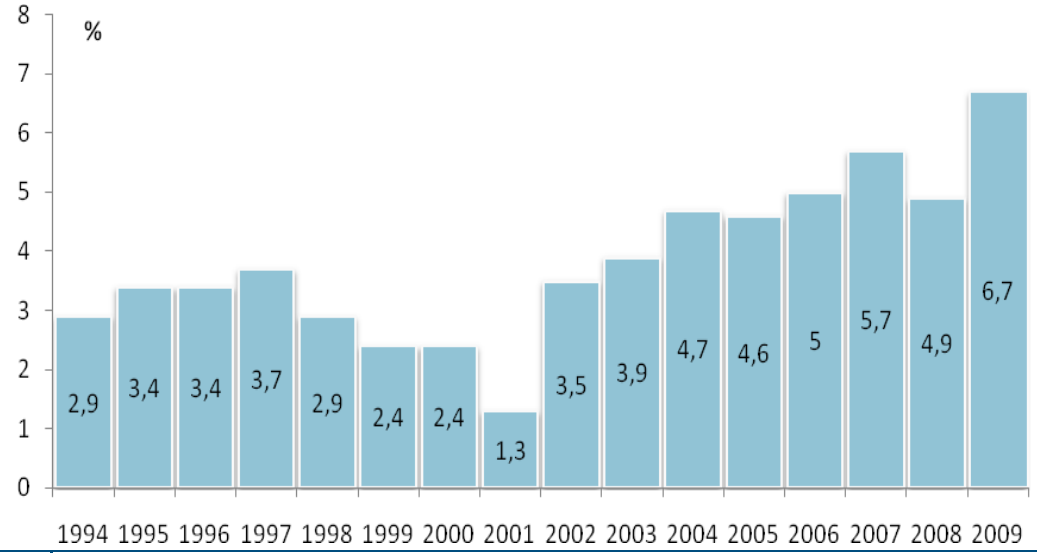


Source National Transplant Organisation (ONT). MSPSI.

Although the situation in Spain in terms of donation is excellent, the ageing of the population, the good results obtained with transplants and the resulting rise in indications for transplant make the waiting lists of patients hoping to receive an organ longer every year, even though the number of transplants is increasing as well. Among the alternatives to increase the pool of donors is non-heart-beating donation, or donation after cardiac arrest. Figure 3.14 reflects the evolution of the percentage of non-heart-beating donors in Spain since 1994; in recent years it has increased, slowly but steadily, until reaching in 2009 the rate of 6.7% of all donors (107/ 1606).

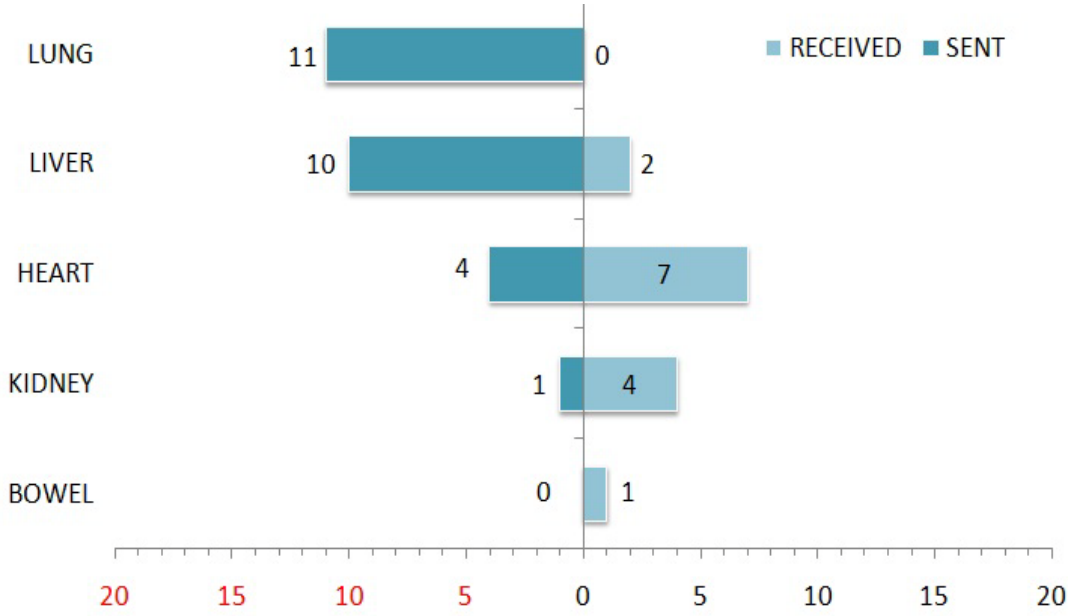
The ONT also manages offers of organs from brain dead donors in other European countries that are received or made through the Catalonian Transplant Organisation, with which it works in close co-ordination. Figure 3.15 and Figure 3.16 show the exchange of organs with other European countries in 2009 and accumulated data since 1990; all together over these 20 years 342 organs have been received and 691 have been sent to other countries.

Figure 3.14 Percentage of non-heart-beating donors in total number of donors. Spain, 1994-2009.



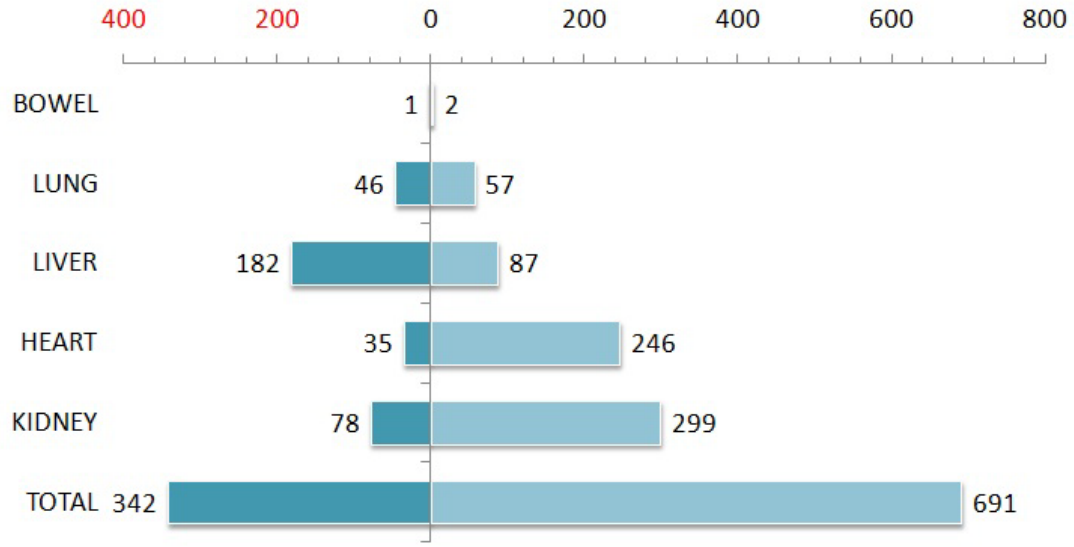
Source National Transplant Organisation (ONT). MSPSI.

Figure 3.15 Exchange of organs with the rest of Europe. Spain, 2009.



Source National Transplant Organisation (ONT). MSPSI.

Figure 3.16 Exchange of organs with the rest of Europe. Spain, 1990 - 2009 (accumulated data).

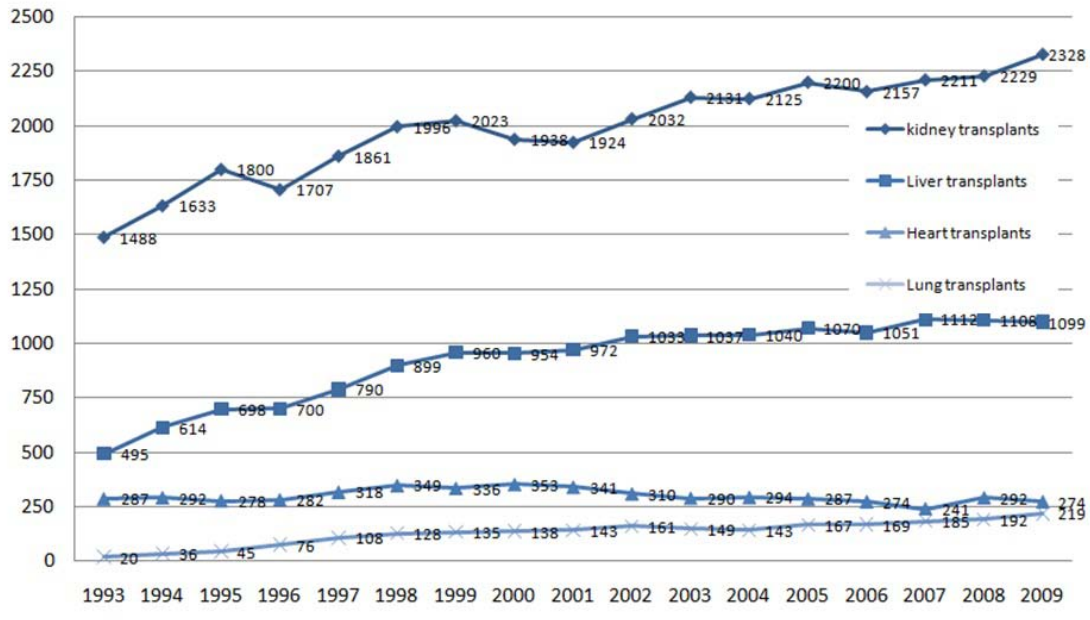


Source National Transplant Organisation (ONT). MSPSI.

Organ transplants

Since the creation of ONT 73,855 organ transplants have been performed in Spain. In 2009, there were 4028 transplants, of which 2328 were kidney transplants. Of them 62 were performed on children (Figure 3.17).

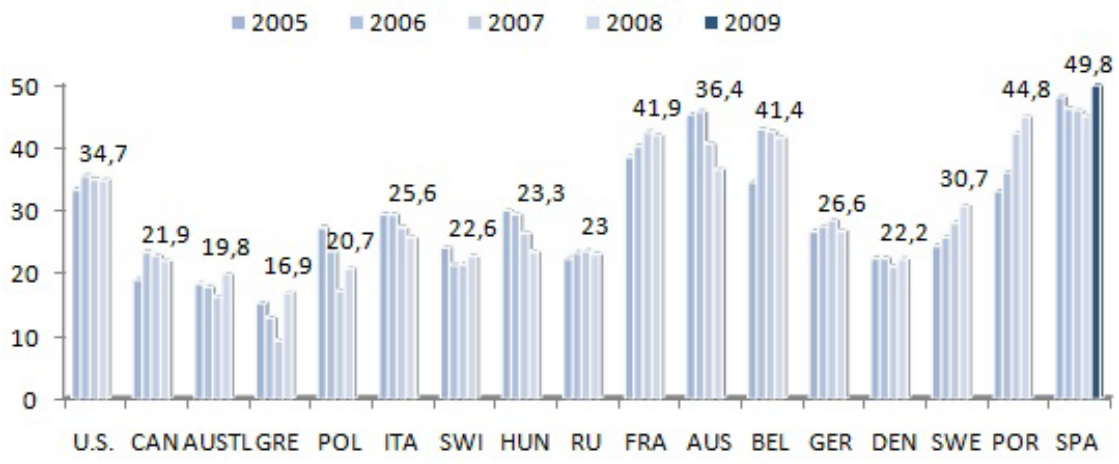
Figure 3.17 Kidney, liver, heart and lung transplant activity (absolute numbers). Spain, 1993-2009.



Source National Transplant Organisation (ONT). MSPSI.

The rate of deceased donor kidney transplant was 49.8 PMP, higher than that of other countries (Figure 3.18). The Global Observatory on Donation and Transplantation,[18] developed by the ONT in collaboration with the World Health Organisation (WHO), collects yearly information on the more than 60,000 kidney transplants performed around the world.

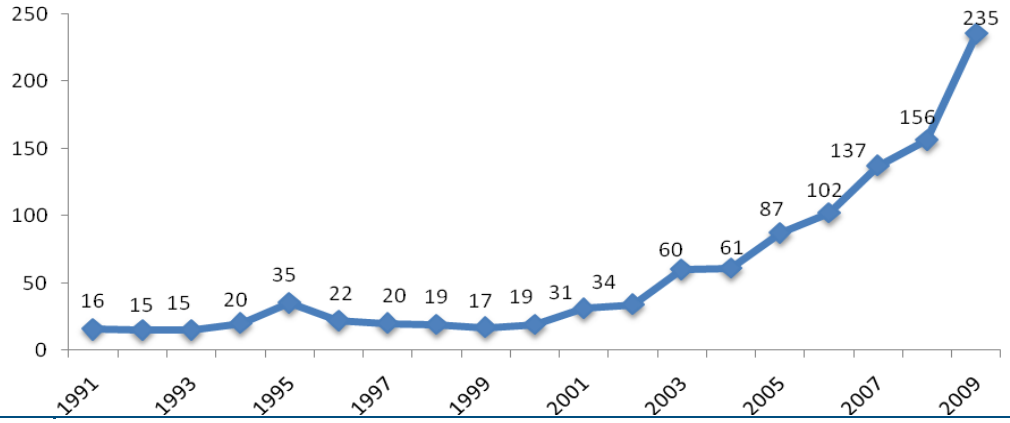
Figure 3.18 **Deceased donor kidney transplant activity (PMP). Spain compared to other countries, 2005-2009.**



Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

Within kidney transplant activity mention must be made of living donor transplants, which have gradually increased over recent years as a complement to deceased donor donation, in those cases in which this procedure may offer better results. In 2009, of the total of 2328 kidney transplants performed, 235 involved living donors (Figure 3.19).

Figure 3.19 **Evolution of living donor kidney transplant activity (absolute numbers). Spain, 1991-2009.**



Source	National Transplant Organisation (ONT). MSPSI.

[18] Global Observatory on Donation and Transplantation: Activities, laws and organization. Final Report 2010: http://www.transplant-observatory.org/Data%20Reports/2010%20Report%20final.pdf

In 2008, the Transplant Commission of the CISNS gave its approval to a National Paired Kidney Exchange Programme, which makes the option of living donor kidney transplant available to incompatible donor-recipient pairs. In 2009, the first paired kidney exchange took place within this programme.

Liver transplantation is currently a consolidated therapeutic option, and it is also on the way to becoming one of the main types of transplant performed around the world. According to the data of the Global Observatory on Donation and Transplantation[19] every year around 20,000 liver transplants are performed in the world; in Spain in 2009 the figure was 1099 (Figure 3.20), of them 67 were performed on children and 29 involved living donors.

The number of liver transplants performed in Spain that year represents 5% of the world's activity in liver transplantation, an especially relevant fact considering the population of this country is barely 0.7% of the world's population. Figure 3.21 shows the evolution of the rate of liver transplants PMP in recent years in various countries.

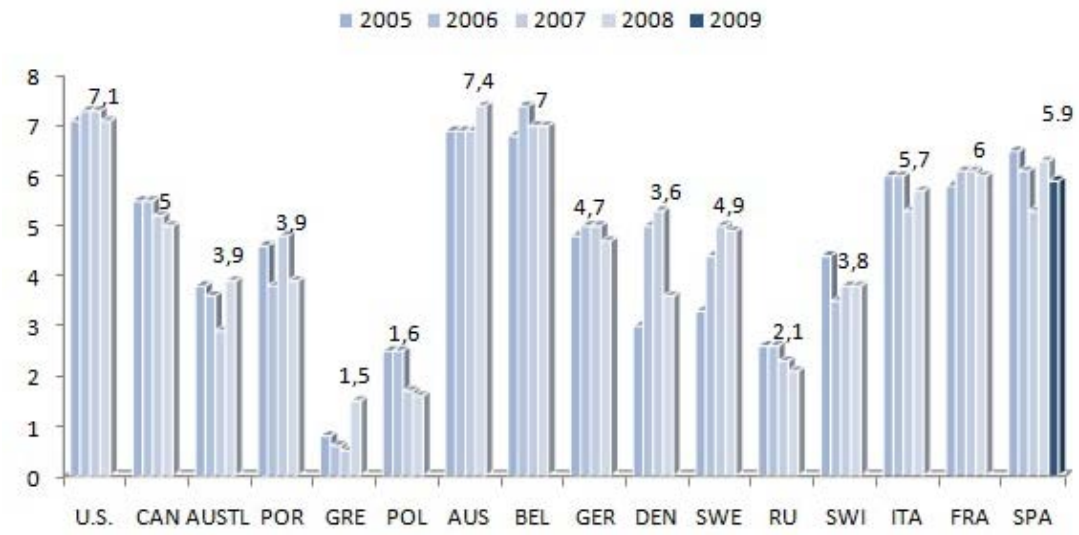
Figure 3.20 **Liver transplant activity (PMP). Spain compared to other countries, 2005-2009.**

Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

Heart transplantation is a consolidated therapy used routinely in many of Spain's hospitals. Between 1984 when this type of procedure began and today, 6048 cardiac transplants have been performed in Spain. Of them 274 (including 25 transplants in children) took place in 2009 (Figure 3.17), which represents a heart transplant activity of 5.9 PMP. Figure 3.22 shows the rates in Spain and in other countries in recent years.

[19] Global Observatory on Donation and Transplantation: Activities, laws and organisation. Final Report 2010: http://www.transplant-observatory.org/Data%20Reports/2010%20Report%20final.pdf

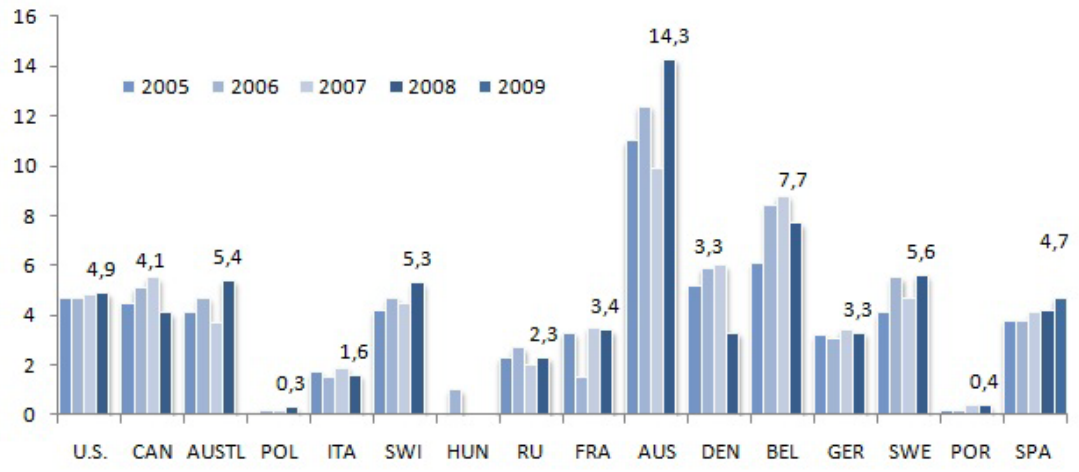
Figure 3.21 Heart transplant activity (PMP). Spain compared to other countries, 2005-2009.



Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

During the last year 219 lung transplants were performed (Figure 3.17); since 1990, the year of the first lung transplant in Spain, a total of 2237 transplants have been performed. The upward trend visible in lung transplants continued in 2009, with 93 single-lung and 126 double-lung transplants taking place. The rate of lung transplantation PMP is 4.7. Figure 3.22 shows Spain's rate compared to that of other countries and years.

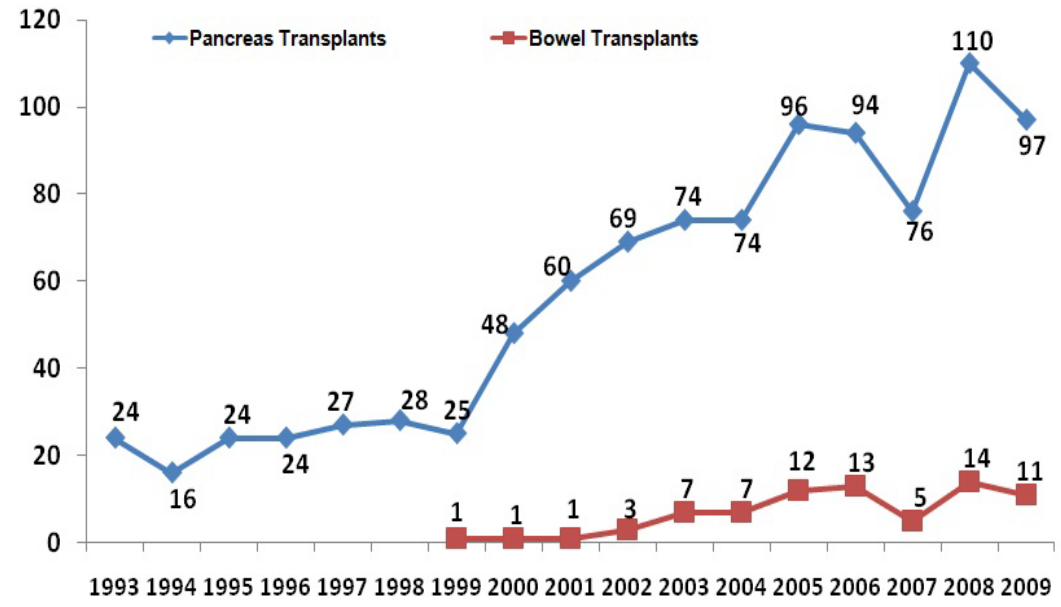
Figure 3.22 Lung transplant activity (PMP). Spain compared to other countries, 2005-2009.



Notes	PMP: per million population
Source	National Transplant Organisation (ONT). MSPSI.

In 2009, 97 pancreas transplants were performed in the various modalities (pancreas-kidney or only pancreas) and 11 small bowel transplants were performed (Figure 3.23).

Figure 3.23 Pancreas and bowel transplant activity (absolute numbers). Spain, 1993-2009.



Source National Transplant Organisation (ONT). MSPSI.

Table 3.22 shows the distribution by autonomous community of the transplants performed in 2009.

Table 3.22 Distribution of transplants by autonomous community, 2009.

--	Kidney transplant	Liver transplant	Heart transplant	Lung transplant	Pancreas transplant
Andalucía	381	195	41	27	23
Aragón	66	30	6	-	-
Asturias	46	32	12	-	-
Baleares	45	-	-	-	-
Canarias	103	40	-	-	9
Cantabria	46	25	14	33	3
Castilla y León	79	27	13	-	9
Castilla-La Mancha	51	-	-	-	-
Cataluña	524	202	42	51	25
Comunidad Valenciana	209	117	36	24	5
Extremadura	33	13	-	-	-
Galicia	127	78	21	40	6
Madrid	417	211	79	44	16
Murcia	48	54	4	-	1
Navarra	35	26	6	-	-
País Vasco	118	49	-	-	-
Rioja	-	-	-	-	-
Ceuta	-	-	-	-	-
Melilla	-	-	-	-	-
TOTAL	**2328**	**1099**	**274**	**219**	**97**

Notes Not including other multivisceral transplants.
Source National Transplant Organisation (ONT). MSPSI.

Activity in tissue and cell donation and transplants 2009[20]

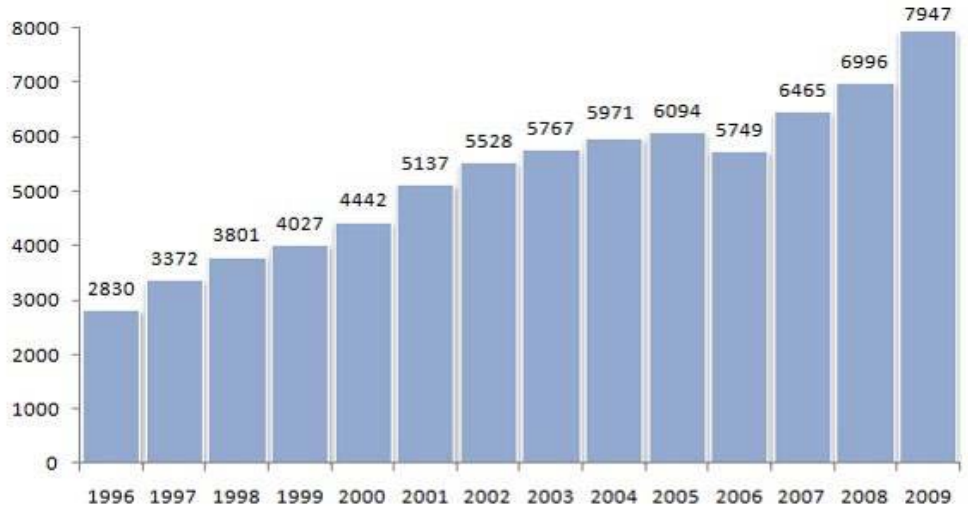
In absolute terms cell and tissue transplantation is much more common than organ transplantation; in the 20 years since the ONT was created, more than 300,000 implants of cells or tissues have been carried out in Spain.

Tissues

Currently more than 12,000 people benefit every year in Spain from the application of some kind of tissue of human origin. The most relevant data concerning tissue transplantation is set forth below.

Musculoskeletal or osteotendinous tissue include a wide variety of tissue types, such as spongy bone, cortical bone, bone-tendon-bone fragments, ligament, meniscus, cartilage, etc. In 2009, there were 1962 donors of osteotendinous tissue, 665 living donors and 1297 deceased donors; a total of 9862 bone fragments were obtained from them. The number of transplanted patients reached 7947 (a rate of 170 PMP), which is higher than previous years (Figure 3.24).

Figure 3.24 **Evolution of activity in musculoskeletal transplantation (number of patients). Spain, 1996-2009.**

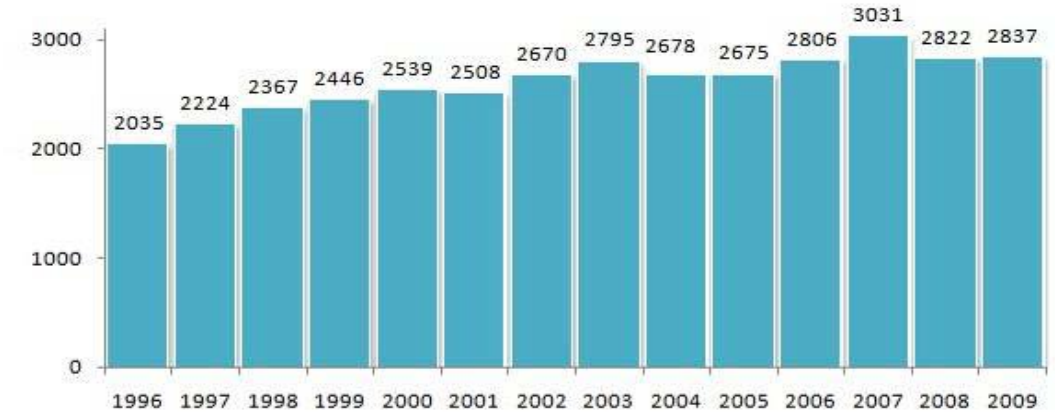


Source National Transplant Organisation (ONT). MSPSI.

Cornea was one of the first tissues to be implanted as such. In 2009, a total of 5185 corneas were obtained and 2837 transplants were performed, which is a figure very similar to that of the preceding year (Figure 3.25). The corneal transplant rate was 60.7 PMP for the country as a whole.

[20] Report on donation and transplant activities. http://www.ont.es/infesp/Paginas/Memorias.aspx]

Figure 3.25 Evolution of activity in corneal transplantation. Spain, 1996-2009.



Source National Transplant Organisation (ONT). MSPSI.

Composite tissue transplantation is defined as the implantation of multi-tissue grafts obtained from a donor in a state of brain death and revascularised using microsurgical techniques, in a recipient unrelated to the donor. This type of transplant has become a reality in Spain and there have been three procedures involving upper extremities (in 2006, 2007 and 2008) and one face implant, in 2009.

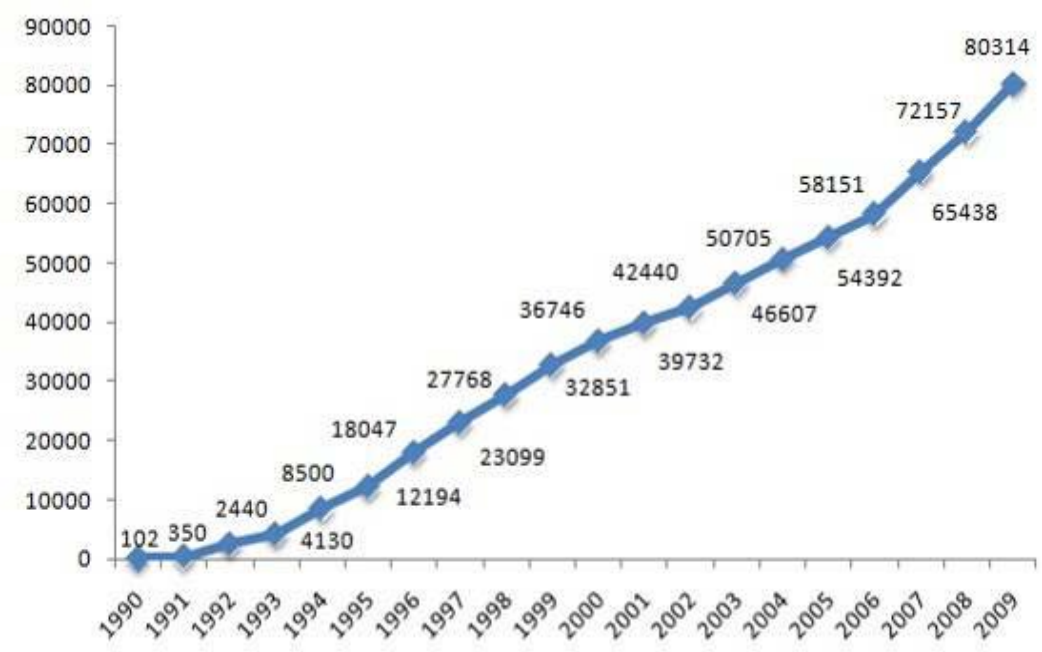
Cells

Hematopoietic stem cell transplantation (HSCT) now constitutes a therapeutic option useful for a wide range of congenital and acquired illnesses affecting the bone marrow. The traditional transplants of bone marrow from a sibling with identical HLA have been complemented by the possibility of obtaining hematopoietic stem cells from other sources, such as peripheral blood or umbilical cord blood, and also by the possibility of using other types of donors, such as other relatives or non-related donors. Currently, around the world there are about 14.5 million donors of bone marrow and over 350,000 units of umbilical cord blood (UCB), which has evidently increased the chances of finding a compatible donor and the possibility of a transplant involving an unrelated donor.

At the end of 2009, the Register of Bone Marrow Donors (REDMO) had a total of 80,314 registered donors. Figure 3.26 shows the evolution of donors registered from 1990 to 2009.

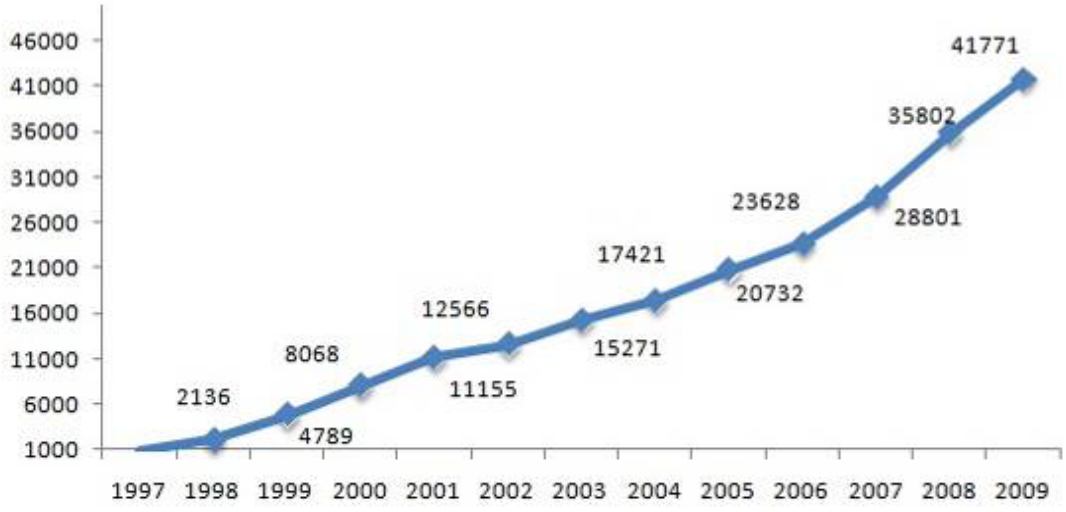
Similarly, at the end of last year there were 41,771 units of Umbilical Cord Blood (UCB) in storage in Spain's blood banks, in consonance with the upward trend observed in recent years (Figure 3.27).

Figure 3.26 Evolution of bone marrow donors registered in the REDMO, 1990-2009.



Source National Transplant Organisation (ONT). MSPSI.

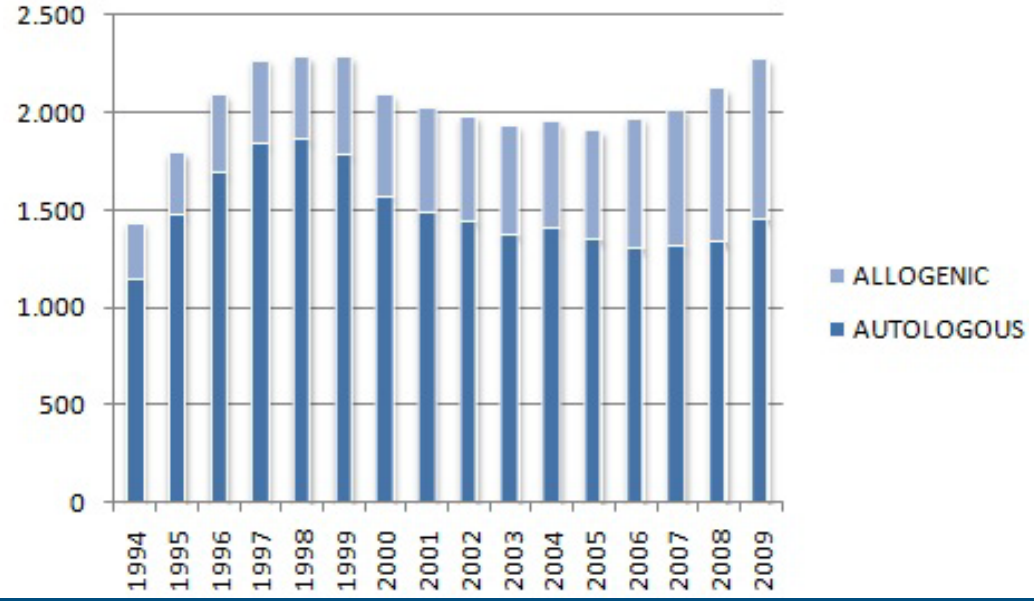
Figure 3.27 Evolution in units of stored umbilical cord blood, 1997-2009.



Source National Transplant Organisation (ONT). MSPSI.

Figure 3.28 shows the evolution in the number of hematopoietic stem cell transplants (HSCT). In 2009 a total of 2275 procedures of this type were performed, of which 1458 (64.1%) were autologous transplants and the remaining 817 (35.9%) were allogeneic transplants. In 2009, there was an increase in the number of transplants, which reached the rate of 48.7 PMP, due basically to the increase in unrelated allogeneic transplants.

Figure 3.28 Evolution of activity in hematopoietic stem cell transplantation. 1994-2009.



Source National Transplant Organisation (ONT). MSPSI.

Training and education

One of the functions of the ONT is to train professionals who take part in one way or another in the process of donation and transplant.

Alianza Training Programme

Since 2005 the ONT, in collaboration with the University of Barcelona and by virtue of a resolution to this effect by the Transplant Commission of the CISNS, has been the sponsor and organiser of an International Training Programme in the Donation and Transplantation of Organs, Tissues and Cells. The aim of the programme is to train professionals from the countries of Latin America who, whenever possible, have been recommended by their respective transplant organisations and who will have direct responsibility in the field of donation and transplant in the future. The training programme is taught annually and six editions have taken place to date, with the participation of 212 professionals from 16 different countries.

Courses on donation and transplantation

In addition, courses and symposia are offered on highly topical issues in the field of donation and transplantation, with the participation of specialised speakers on each topic, from both Spain and other countries. Since January of 2005, fifteen courses and symposia have taken place, addressing various aspects of donation, transplantation and cell therapy.

General training courses for transplant co-ordinators are given in collaboration with other institutions, subsidised by the Ministry of Health through the ONT. Every year three international courses and one national course take place. They are held in Barcelona, Granada and Alicante.

A course on quality control and management in activities related to human tissues has been given since 2007, in collaboration with the Office of Transplant Co-ordination (OCT) of Galicia, of the Regional Health Service of Galicia, to train professionals from tissue establishments.

Training courses on living donor kidney transplants have been organised for nephrologists and urologists since 2008, in collaboration with the Puigvert Foundation of Barcelona. Also, training courses on donation and transplant for third and fourth year residents specialising in Critical Care Medicine are organised in collaboration with the Spanish Society of Critical Care Medicine and Coronary Units (SEMYCIUC). They have been taking place since 2006 and are held in Granada, Barcelona, Madrid and Valladolid (for the regions of Castilla y León and Asturias).

During 2009, training courses began for health professionals working in emergency services, in collaboration with the Spanish Society of Emergency Medicine (SEMES). These courses were given in Castilla y León (Zamora, Valladolid, Segovia and Salamanca) and in Cataluña (Gerona, Tarragona, Barcelona and Sant Cugat)

Courses on communication in critical situations

La ONT teaches a seminar called *"The donation process: attitudes and implications."* Its objectives are: to teach participants the most effective communication strategies for informing families about the death of their loved one, to help participants respond appropriately to the family's pain as the request for organ donation is made, to give participants the opportunity to practice the skills involved in the donation request process, to increase their awareness of the potential value that organ and tissue donation can have for the bereaved families.

Since 1992 between 18 and 30 seminars have been held every year. They are taught exclusively by ONT professionals to groups of 20 health professionals. Over 390 courses have been given in Spain, with the participation of 7500 professionals: doctors, nurses and other medical and paramedical professions.

This training programme is underway in Latin America as well. The ONT teaching team offers training courses to selected groups that will work as trainers, preparing them to subsequently teach the training course in their home country.

Also, every year there are various meetings and workshops with other relevant groups, such as: media professionals, to ensure that media attention is suitable and contributes to the population's knowledge about donation and transplantation, and justice system workers, to debate subjects related to promotion and transplantation, with a view to enhancing co-ordination among groups and their actions.

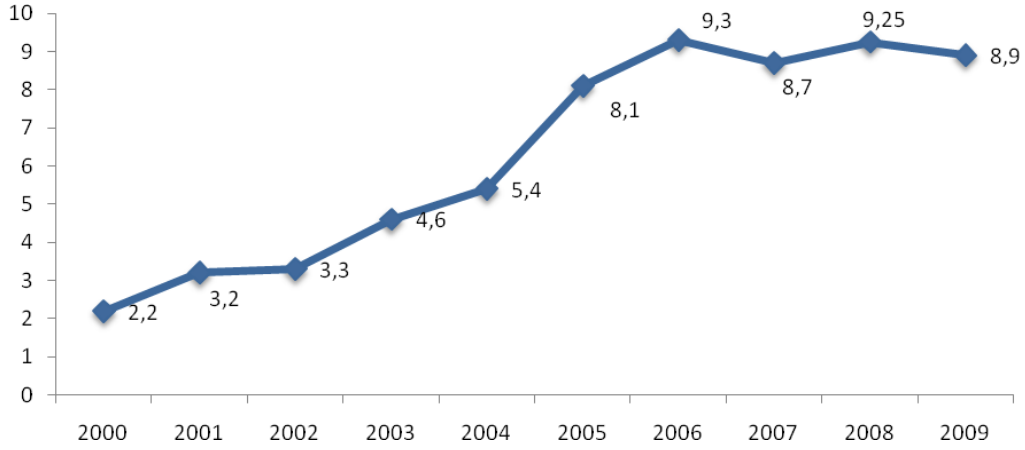
Promoting donation among minorities and ethnic groups: Donation without Borders

One characteristic of the SNS is that it provides universal health care, guaranteeing access and treatment to any person residing within Spain's borders. This constitutes a rather relevant variable for the national donation and transplantation system, in terms of the potential donors and also the potential recipients in these groups.

The percentage of foreigners that live in Spain is about 12.1%. Currently the countries with the greatest representation in this country are Morocco, Ecuador, Rumania and the United Kingdom. And there are also Spaniards who belong to the Roma ethnicity, estimated to be around one million. The Roma community does not have a culture of organ donation but there are Roma patients who are waiting for organs and who have already received transplants.

Contribution by resident foreigners in Spain to organ donation was almost 9% in 2009 (Figure 3.29).

Figure 3.29 Evolution of the percentage of foreign donors in the total, 2000-2009.



Source National Transplant Organisation (ONT). MSPSI.

Donation without Borders project

This is a specific plan to promote organ donation by people of different cultures and religions, without regard to their country of origin. Its main aims are: to provide clear information about organ donation and transplantation to the population residing in Spain regardless of their culture or country of origin, to foment collaboration between the transplantation network and cultural mediators, by defining a role for the latter within the ONT and providing them with appropriate training so as to achieve this goal and create closer relationships with the different groups' most representative social organisations. The principal actions carried out as part of this project are:

— Information and awareness campaign about organ donation and transplantation: based on brochures and posters. This campaign speaks of donation as a generous act of altruism independent of cultural differences that exist within the country and as an act that is accepted unreservedly by the various religions. What is innovative about this campaign compared to previous ones is that the text varies depending on the target group. The information appears in different languages: English, French, Rumanian, Arabic and Chinese, with Spanish as the common language.

— Specific training: A Donation without Borders workshop was held in 2007, attended by transplant co-ordinators from all over the country and cultural mediators from various geographical areas and different cultures. The training focuses on approaching families that come from another culture, religion or country in a painful moment such as the death of a loved one. It is impossible for a transplant co-ordinator to have a perfect grasp of all the cultural aspects that differentiate the peoples of the world but it is necessary for them to understand certain issues that will help them while talking with the family. Similarly, cultural mediators have no need to know all the details of the donation and transplant process but they can collaborate with the health professional much more effectively if they have received training on

this matter. Teamwork by the hospital's transplant co-ordinator and the cultural mediator can contribute to forming a more positive relationship with the deceased person's loved ones.

International co-operation

Over its 20 years of history, the National Transplant Organisation has collaborated at the international level on many occasions, both directly with other countries that have expressed interest in collaboration, and also through international bodies. The Spanish Model of Donation and Transplantation has been transferred successfully to other countries and regions around the world.

Collaborative efforts in the area of transplantation have had three main focal points: Europe, Latin America and the World Health Organisation.

Europe

Spain has collaborated extensively with the Transplant Committee of the Council of Europe and served as president of this Committee for 7 years. Spain was responsible for drawing up most of the documents (around 20 recommendations and consensus documents) that form the basis of the current actions of the European Commission and Parliament on the subject of transplants. These contributions have constituted a basic pillar in the development of transplants all over Europe and by extension have been the field of reference for other parts of the world in their efforts to consolidate organ donation and transplantation.

Since 1996 the ONT has gathered data about donation and transplant activity for publication in the annual Transplant Newsletter of the Council of Europe.[21]

Spain played a central role in drawing up the implementing regulations of Directive 2004/23/EC[22] on quality and safety standards in the donation and distribution of human cells and tissues and its technical appendices of 2006.

Through the ONT, Spain has been a vital participant in many of the projects funded by the EU in the area of organ donation and transplantation in recent years, and in the action plan undertaken by the European Commission to accompany the recently approved Directive on standards of quality and safety in human organs intended for transplantation.

Latin America

In 2005, the Latin American Network/Council of Donation and Transplants[23] was created. This body has contributed in a decisive manner to the articulation of the donation systems in all Latin American countries, an example of the transposition of the Spanish Model of donation and transplantation to other countries. The RCIDT has absorbed other co-operation activities that were already underway, such as the Latin American Donation and Transplant Registry (led by Grupo Puntacana) and the ALIANZA International Training Programme on the Donation and Transplantation of Organs, Tissues and Cells.

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[21] Transplant Newsletter of the Council of Europe. [http://www.ont.es/publicaciones/Paginas/Publicaciones.aspx]

[22] Directive 2004/23/CE of the European Council and the Parliament, relating to the establishment of quality and safety norms to donate, obtain, assess, process, preserve, store and distribute human cells and tissues. [http://www.ont.es/infesp/Legislacin/DIRECTIVA_CELULAS_Y_TEJIDOS.pdf]

[23] Red/Consejo Iberoamericano de Donación y Trasplante. [http://www.transplant-observatory.org/rcidt/default.aspx]

World Health Organisation (WHO)

In May of 2004 the World Health Assembly passed Resolution 57.18[24] on human organ and tissue transplantation. By virtue of this resolution transplants became a specific area of work at the WHO.

The Global Observatory on Donation and Transplantation[25] forms part of the WHO strategy for implementing its Resolution 57.18 and was designed and launched by ONT in collaboration with the WHO. The web site aims to provide worldwide information on various aspects of the donation and transplantation of organs, cells and tissues, for both professionals and the general public. Thanks to this close collaboration, the ONT has been an official WHO Collaborating Centre since February of 2008.

The ONT provides experts to participate in the regional consultations and meetings convened by the WHO on the subject of transplantation. It has also played a relevant role in the revision and updating of the WHO Guiding Principles on human cell, tissue and organ transplantation[26] which will be discussed, with a view to possible approval, during the 63rd World Health Assembly in May of 2010.

Spain takes part in numerous projects such as the one led by WHO, ONT and The Transplantation Society (TTS) to combat commercialism, organ trafficking and transplantation tourism. One of the achievements of this team is the *Declaration of Istanbul on Organ Trafficking and Transplant Tourism* (2008).[27] Other projects led by the ONT, WHO and TTS are:

— *The Global Data Dictionary on Donation and Transplantation*. TTS has undertaken the project of creating a global donation and transplantation glossary, to provide unified standards for the collection and analysis of information in this area, as well as some key universal measures.

— *Data Harmonization in Transplantation: Measuring the Potential Supply of Organs from Deceased Donors* focuses on how to correctly measure the potential of deceased donor donation. It is also a strategy for combating the shortage of transplant organs. Its objectives are to diminish the differences in transplant activity levels between countries and thus reduce the large inequalities faced by citizens around the world in terms of their chances of receiving a transplant, while combating illegal transplant practices at the global level, specifically, organ trafficking and transplant tourism.

[24] Resolution WHA 57.18 on human organ and tissue transplantation. [http://www.transplant-observatory.org/Contents/Library/Documents%20and%20guidelines/Pages/default.aspx?RootFolder=%2fContents%2fLibrary%2fDocuments%20and%20guidelines%2fDocuments0%2fDocuments%20and%20Guidelines&FolderCTID=&View=%7bAC2DA617%2d8DBF%2d4AFC%2d9904%2d3E9D087B1533%7d]

[25] Global Observatory on Donation and Transplantation. [http://www.transplant-observatory.org/Pages/Home.aspx]

[26] WHO Guiding Principles on human cell, tissue and organ transplantation. [http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_24-en.pdf]

[27] Declaration of Istanbul on Organ Trafficking and Transplant Tourism. [http://www.transplant-observatory.org/Contents/Library/Documents%20and%20guidelines/Documents0/Documents%20and%20Guidelines/Declaration%20of%20Istanbul%20on%20Organ%20Trafficking%20and%20Transplant%20Tourism.pdf

The United Nations Organisation:

The ONT was the co-author of the *Study on trafficking in organs, tissues and cells and trafficking in human beings for the purpose of the removal of organs*, prepared jointly by the Council of Europe and the United Nations.[28] The study highlights the paramount importance of respecting the principle that "The human body and its parts as such shall not give rise to financial gain" (Convention of Human Rights and Biomedicine and the WHO Guiding Principles on Transplantation).

It also points out that in public debate trafficking in organs must be distinguished from trafficking in human beings for purposes of organ removal. Further, the study advocates the creation of an international legal instrument that sets out an internationally-agreed definition of organ trafficking, along with measures to prevent such trafficking and protect its victims.

The study has prompted the UN to join the struggle against practices that violate the basic rights of people, that affect the quality and safety of the transplant process and have a deleterious effect on the global image of transplantation. The UN and the Council of Europe are currently in the process of studying the possibility of drafting a specific treaty on the subject of organ trafficking.

[28] Joint Council of Europe / United Nations Study on trafficking in organs, tissues and cells and trafficking in human beings for the purpose of the removal of organs is available at the Council of Europe website. [http://www.coe.int/t/dghl/monitoring/trafficking/Docs/News/OrganTrafficking_study.pdf]

4 Public Health

4.1 Epidemiology. Actions aimed at health promotion and the prevention and control of diseases

Health promotion

In the area of education, in 2009 a project called *Quality criteria for programmes and actions related to health promotion and health education within the school system*[1] was put in place. This project defines the quality criteria to be used by teachers in the selection of health promotion and education programmes and materials. It forms part of the framework agreement for collaboration between the Ministry of Education and Science and the Ministry of Health and Social Policy. This project is an integrated and realistic proposal designed to facilitate health promotion and education at all schools. As a conclusion to the project, the guide *"Health at School. A Guide for Getting There"*[2] was published.

With regard to health at universities, in the final quarter of 2009 the UPNA (Universidad Pública de Navarra), one of the first health-promoting universities in Spain and a member of the Spanish Network of Healthy Universities (REUS), hosted the 4th International Conference of Health Promoting Universities. Currently 21 universities take part in this network. Its lines of strategy include: strengthening university settings that promote health; incorporating training in health promotion into university programmes at the undergraduate and post-graduate level; collaborating in research on health promotion; enhancing participation and collaboration among public health bodies, community institutions and universities; and expanding the range of campus services and activities aimed at promoting health in the university community.

In terms of the health of cities, in 2009 work continued on the project Spanish Network of Healthy Cities (RECS) through a collaboration agreement with the Spanish Federation of Municipalities and Provinces (FEMP). There are currently 150 member cities and residents of these cities account for almost 40% of the Spanish population. RECS is present at the European level, as a national network belonging to the "network of networks" and also as a member of Phase V Healthy Cities (2009-2013).

Also worth noting is the then Ministry of Health and Social Policy's participation in the 2009 Kenya Conference, where the *Nairobi Declaration* was adopted. The declaration defines the strategies and agreements necessary to reduce existing inequalities in health and development, through health promotion.

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[1] State of affairs regarding advances achieved, existing needs and future challenges in the area of health promotion and education in Spanish schools. [http://www.msc.es/profesionales/saludPublica/prevPromocion/promocion/saludJovenes/docs/DiagnosticoSituacionEscuela.pdf

[2] *Ganar salud en la escuela. Guía para conseguirlo*. [http://www.msc.es/profesionales/saludPublica/prevPromocion/promocion/saludJovenes/docs/ganarSaludEscuela.pdf]

In addition, the *International Conference on Prison Health Protection* was organised by the Ministry and took place in Madrid. In the days preceding the conference the WHO/Europe Health in Prisons Project (HIPP) held its annual meeting.[3]

Prevention of health problems and their determinants

Alcohol and tobacco

Interventions aimed at preventing problems caused by alcohol include Spain's participation, since 2006, in the European Union strategy to help member states reduce alcohol-related harm, through the *Committee on National Alcohol Policy and Action,* an activity taking place in the context of the EU Programme of Community Action in the field of Public Health (2005-2008). Spain also plays an important role, as alcohol policy representative to the WHO, in preparing the world strategy for the reduction of alcohol abuse, which is set to be approved by the 63rd World Health Assembly.

As for smoking, in 2009 work has gone into the modification of Law 28/2005 on health care actions to combat smoking, the main purpose of which is to extend the smoking prohibition in all closed public areas. The law is set to be approved by the Parliament in 2010. New impetus was given to the activities of the Observatory for the Prevention of Smoking, with its main lines of work being defined in the document *Evaluation of the impact of Law 28/2005 on health care actions to combat smoking* and the preparation of the projects: *Arguments in favour of the reform of Law 28/2005*; *Panel on general indicators of tobacco use in a vigilance system;* and *Report on the evaluation of the efficacy and effectiveness of interventions for smoking cessation*.

With regard to activities pertaining to the introduction of tobacco product regulation, restrictions have been made in terms of ingredients, both in naturally present and added ingredients, and also in the maximum levels permitted. The objective is to eliminate from such products the addictive or toxic ingredients (nicotine, tar, CO, etc.) that are most damaging to people's health.

It should also be noted that in 2009 most autonomous communities undertook specific actions aimed at preventing the use of tobacco, alcohol and other drugs, as shown in Table 4.1.

[3] News item: "The World Health Organization (WHO) gives awards to three innovative Spanish projects in the area of prison health."
[http://www.mpr.es/delegaciones_gobierno/dg_sdg/cantabria/dg_cantabria/actualidad/notas_de_prensa/notas/2009/10/2009_10_08-1.html]

Table 4.1 **Actions by the autonomous communities towards the implementation of plans and programmes to prevent the use of tobacco, alcohol and other drugs, 2009.**

	ACTIONS UNDERTAKEN
Andalucía	**Tobacco:** continuation of the "Comprehensive Plan on Smoking Prevention" 2005-2010. More information at http://www.juntadeandalucia.es/salud/esxmi
Aragón	**Tobacco, alcohol and other drugs**: Continued participation in the project Drojnet2, an operational co-operation project undertaken by Spain-Andorra-France 2007-2013 that focuses on innovative information services about drugs (prevention and risk reduction) aimed at young people and using IT. More information at www.drojnet2.eu
Baleares	**Tobacco**: Implementation of "School Programmes for the Prevention of Drug Abuse and other Addictions" for academic years 2008-2009 and 2009-2010. Talks about preventing drug abuse at social-community centres. Campaigns on "Smoking Cessation at Schools" and "Awareness. World No Tobacco Day." Collaboration with the "Smoke-free spaces network" **Alcohol and other drugs**: Implementation of "School Programmes for the Prevention of Drug Abuse and other Addictions" 2008-2010. Awareness campaigns "World Day without Alcohol" and "World Day against Drugs." Training activities for educators and professionals who work with youth in situations of risk and at drug treatment centres. Beginning of therapeutic treatment groups in drug treatment centres. Implementation of prevention programmes. More information at www.infodrogues.caib.es
Canarias	**Tobacco:** Implementation of the programme "Smoking Intervention at Secondary Schools (ITES)" and of "Smokefree Class" 2008-2010 and Manifesto "Canarias free of tobacco smoke." http://www2.gobiernodecanarias.org/sanidad/scs/aplicacion.jsp?idCarpeta=2b294ce4-0fce-11de-9de1-998efb13096d. http://www.smokefreeclass.info/ www.canariaslibredehumodetabaco.org **Tobacco, alcohol and other drugs**: training of mediators in drug prevention at Navy Headquarters in Canarias. On-line course about advances in drug dependence issues. Actions focused on the workplace. Course on addictions: intervention strategies. Skills update course on the treatment of opioid addiction with Buprenorphine/Naloxone. Preparation of III Regional Plan on Drugs 2010-2012. http://www2.gobiernodecanarias.org/sanidad/dgad/documentos/IIIPCsDBORRADOR.pdf
Cantabria	**Tobacco**: continuation of actions within the "Plan on Smoking Prevention and Control" 2008-2011. **Alcohol and other drugs**: evaluation of the Regional Drug Strategy 2005-2008 and preparation of the 2009-2013 strategy.
Castilla y León	**Tobacco, alcohol and other drugs**: Annual school-based prevention programmes DISCOVER, "Building Health" and "Galilei." Extracurricular prevention programmes ("¿Te apuntas?", "¿Vivir el momento?") and family-based prevention programmes "Moneo", "Dédalo", "Alfil" and "Indicada") http://www.jcyl.es/web/jcyl/Familia/es/Plantilla100/1142233180339/_/_/_ **Alcohol:** training through an online health workshop on the reduction of harm related to problem drinking, training of young mediators in the prevention of drug abuse, training of local police officers, of salespeople in shops, supermarkets, etc. and implementation of the programme "Prevention at the University," begun in 2008. **Other drugs**: annual programme "Drug Prevention at the workplace." Pilot experience of the adaptation of the Guide to Processes and Procedures at centres for ambulatory treatment of people with drug problems, to the needs detected thanks to the study on the needs of women with drug problems 2009-2010.
Castilla-La Mancha	**Tobacco:** continued actions in "Plan for Smoking Prevention and Treatment in Castilla-La Mancha 2003-2010" and "Financing Program for pharmacological smoking cessation in model groups and high-risk smokers in Castilla-La Mancha." More information at www.alcazul.com **Alcohol and other drugs**: Continuation of activities in "Plan to combat alcoholism and drug dependence in Castilla-La Mancha 2006-2010." More information at www.cocaonline.org; www.od.jccm.es
Cataluña	**Tobacco:** continuation of the programme "Smoking Prevention and Treatment," begun in 2004. More information at http://www.gencat.cat/salut/depsalut/html/ca/dir2070/index.html **Alcohol:** continuation of programme "Beveu Menys" for early detection and short-term intervention, at the primary care level, in risk drinkers, which began in 2005. More information at http://www.gencat.cat/salut/depsalut/html/ca/dir2015/doc10215.html **Other drugs**: constitution of "Interdepartmental Drug Commission." Elaboration of "Prevention Plan: drug use and associated problems (1st phase) 2009-2015." Start-up of "Information system on drug prevention and the promotion of mental health in Cataluña (pilot phase) 2008-2010." Start-up of programme on prevention of drug use and associated risks in the sphere of nightlife, called "Nits Q" Start-up of the new telephone hotline, free of charge, for drug information and advice "Línea Verde." Beginning of pilot project "Overdose Prevention" 2009-2015. Extension of

	programmes for AIDS prevention in drug addicts, begun in 1992. Design of the plan "Overdose Prevention and access to treatment for drug addicts with hepatitis B and C" 2009-2010.
Comunidad Valenciana	**Tobacco:** continuation of actions in "Programme to reduce smoking," begun in 1988, and to put in effect Law 28/2005 on health care measures to combat smoking and on the regulation of the sale, supply, consumption and advertising of tobacco products. More information at: http://www.sp.san.gva.es/DgspPortal/docs/DECRETO_57_2006.pdf Annual programme "Travelling Tobacco Classroom." Implementation of educational projects aimed at smoking prevention and the "Smokefree Class" programme for secondary school students. Educational activities within the Health Education Programme (EpS) at schools. **Alcohol and other drugs:** continued actions toward the prevention of drug dependence and other addictive disorders, begun in 2003. More information at: https://www.docv.gva.es/portal/portal/2003/04/03/pdf/doc/2003_3892.pdf Yearly subsidies for actions in the area of prevention and treatment of drug dependence and other addictive disorders. Monitoring of the "Strategic Plan on Drug Dependence and other addictive disorders 2006-2010." More information at http://publicaciones.san.gva.es/publicaciones/documentos/V.2942-2007(CE).pdf
Extremadura	**Tobacco:** first phase of the creation of "Plan for Smoking Treatment and Prevention in Extremadura 2009-2012" the purpose of which is to maintain and strengthen strategies aimed at reducing the prevalence of smoking, delaying the age when smoking starts, providing assistance in smoking cessation and increasing the protection of non-smokers from air contaminated by tobacco smoke. **Alcohol:** implementation of project "Con sentido, tú decides" in collaboration with the Regional Ministry of Youth and Sport, which aims to reduce traffic accidents among young people, especially those caused by drinking and driving. **Other drugs:** continuation of school, workplace, family and community-based prevention programmes, providing information about drug use and addictions, promoting healthy lifestyles and delaying the age at which drug use begins. Implementation of opioid agonist treatment programmes (using methadone) at drug treatment centres in Extremadura (CEDEX), mobile units, Hospital Perpetuo Socorro, prisons, Red Cross facilities and health centres.
Galicia	**Alcohol and other drugs**: early phase of the creation of the Law on the Prevention of Alcohol Consumption in Minors. Continuation of actions related to "Regional Plan against Drugs 2007-2009." Prevention activities in the area of drug dependence. http://www.sergas.es/Publicaciones/DetallePublicacion.aspx?IdPaxina=40008&IDCatalogo=1654
Madrid	**Tobacco:** third evaluation of the programme "Estudio ACEPTA" aimed at parents, teachers and students in compulsory secondary education (ESO) for smoking prevention. It compared a cohort from 45 experimental centres (3665 students) and 47 control centres (3772 students), chosen randomly from public, semi-public and private schools in the region. Project "Teenagers without Tobacco" implemented in the first cycle of secondary education to prevent smoking by building skills in groups aged 12-14. In 2009 a total of 1361 workshops took place with the participation of 16,253 students. http://www.madrid.org/cs/Satellite?cid=1142563596782&language=es&pagename=PortalSalud%2FPage%2FPTSA_pintarContenidoFinal&vest=1142328768577 Monitoring of project Network of Smoke-free Hospitals which began in 2004 and now has 34 accredited hospitals. Community actions to reduce smoking, participating in World No Tobacco Day and Smoke-free Week, publishing a practical guide for giving up smoking and creating a folder with advice and recommendations to help patients give up the habit.
Murcia	**Tobacco:** continuation of smoking prevention and control programme, which began in 1997, and the programme "Network of Tobacco-free Health Care Centres in Murcia" which includes the Network of Tobacco-free Hospitals in Murcia (part of the European network of Smoke-free Hospitals, with 6 participating public hospitals) and the programme "Tobacco Free Centre" by the Regional Ministry of Health. Agreements and subsidies for activities related to smoking prevention, with union organisations (CCOO and UGT Murcia), universities and the Murcia City Council, the Youth Council of Murcia and the Foundation for Health Care Training and Research. Media interventions using the projects presented in previous editions of the "Contest for ideas in smoking prevention" organised by the Youth Council and the Regional Ministry of Health. Publication of an interactive guide on smoking and alcohol prevention activities in the final two years of primary education. http://www.murciasalud.es/pagina.php?id=124225&idsec=1377
Navarra	**Tobacco**: continuation of regional "Action Plan to combat smoking" which focuses on preventing initiation, helping smokers give up the habit and creating smoke-free spaces, begun in 2001. http://www.cfnavarra.es/sintabaco/ **Alcohol and other drugs:** continuation of regional plan on drug dependence, which began in 1994 and focuses on universal prevention activities in family, school, community and primary care settings, as well as selective/indicated prevention in the same settings.
País Vasco	**Tobacco:** continuation of the "Smoking Prevention Plan" http://www.osanet.euskadi.net/r85-

	20432/es/contenidos/informacion/tabaquismo/es_4051/tabaquismo_c.html
La Rioja	**Tobacco:** presentation of the first "Regional Plan to Combat Smoking 2009-2013" to reduce prevalence of smoking and protect the population from air contaminated by tobacco smoke. Content development in the area of healthy habits and lifestyles in the "2nd Regional Health Plan 2009-2013." End of European competition "Smoke-free Class" in 2008-2009 academic year and beginning of the same for 2009-2010, to stimulate smoking prevention in 12-14 year olds. Programme "Smoke-free Families" targeting families of schoolchildren participating in competition "Smoke-free Class." Information and support activities for smokers who want to give up the habit, during "Smoke-free Week" and "World No Tobacco Day." Monitoring of "Care Circuit for Smokers" and of the "Smokers Care Unit" which began in 2006. Updating of online, self-help programme "La Rioja without Tobacco," which also began in 2006. www.lariojasintabaco.org **Alcohol and other drugs:** continuation of co-ordinated activities involving the education and health systems and municipal governments to promote health lifestyles and the prevention of addictive behaviours. In 2009 a new line of work began, based on harm and risk reduction in especially vulnerable populations, especially young people, but also in other spheres, like the workplace. Work was consolidated in the area of addictions without substances, such as those related to the new technologies. Study of drug use by the general population in La Rioja, through the survey of school students and general population. The research has led to the publication of a manual called Drojnet, created by the Drug Dependence Service. Renovation of the institutional web page www.infodrogas.org and creation of the web page www.drojnet2.eu Organisation of courses by the Drug Dependence Service, in conjunction with the Fundación Rioja Salud, about the challenges related to dual pathology, intervention in the use of cocaine, cannabis and new drugs in primary care, clinical interviews regarding addictions and attention to pregnant women who smoke.
Ceuta	**Tobacco:** continuation of actions related to the promotion of healthy lifestyles and the prevention and control of smoking, included in the "Ceuta Health Plan 2008-2011." **Alcohol and other drugs**: continuation of actions related to the prevention of drinking and the use of other drugs, included in the "Ceuta Health Plan 2008-2011."
Melilla	**Tobacco:** continuation of actions related to the promotion of healthy, smoke-free lifestyles and the prevention and control of smoking, which form part of the primary care benefits package.
Source	Information provided by the autonomous communities and the National Institute for Health Management (INGESA) for this report.

Injuries

In Spain, injuries are the leading cause of death among young people, and they are the third cause of death up to age 59, with greater frequency among men than among women. In the area of injuries due to traffic accidents, in 2009 the Ministry of Health collaborated with the National Traffic Authority (DGT) to prepare the next Strategic Plan on Road Safety, to be finished in 2015. It takes into account the results of the evaluation of the Strategic Plan 2004-2008 (Plan Estratégico 2004-2008).[4] The Ministry of Health has participated in the different working groups of the National Observatory on Road Safety about the priority groups to target: children, young people, adults, pedestrians, and also in a specific group that addressed alcohol, drugs and pharmaceuticals. It is also planned that the Permanent Commission on Public Health will collaborate with the DGT to ensure the proper functioning of the State Registry of Traffic Accident Victims, created by Law 18/2009, of 23 November 2009.

In addition, Spanish authorities co-ordinated the response to the WHO survey on traffic injuries, with the participation of experts and the DGT. The results of the questionnaire have been incorporated, along with those of other participating countries, in the publications *European Status Report on Road Safety*[5] and *Global Status Report on Road Safety.*[6]

[4] Third Forum on SNS Health Information Systems.
Sources of health information. Traffic accident information system.
[http://www.msps.es/estadEstudios/estadisticas/sisInfSanSNS/3ForoSISNS/docs/PilarZori_ponencia3Foro.pdf]

[5] European Status Report on Road Safety. [
http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=es&type_doc=COMfinal&an_doc=2000&nu_doc=125]

Among injuries, it is important to point out that drownings are the second cause of death among children in the WHO European Region. Among the steps taken to prevent such deaths, the guide by the European Child Safety Alliance *Protecting Children and Youths in Water Recreation. Safety Guidelines for Service Providers* was translated into Spanish (*"*Protección de los niños y de los jóvenes en las actividades acuáticas recreativas. Guía de seguridad para los proveedores de servicios*")* and has been distributed to the autonomous communities. In addition, 12,000 posters with 10 key messages to prevent injuries and drownings were printed and distributed.

Health Alerts

Among the tasks of the Co-ordinating Centre for Health Alerts and Emergencies (CCAES), the unit in charge of co-ordinating information and response to national and international health alert and emergency situations that are a real or potential threat to the health of the population, is to prepare daily reports on the detection of health alerts. The report covers health threats occurring at either national or international level that are especially relevant because of their implications for public health in the country.

The report is sent daily to the representatives of epidemiological surveillance of each autonomous community, units of the Ministry of Health, Social Policy and Equality (MSPSI), the Ministry of Science and Innovation (Carlos III Health Institute), the Ministry of Defence and the Ministry of Presidential Affairs (Department of Infrastructure and Monitoring of Crisis Situations).

In 2009 the alerts that required an evaluation of health risk in Spain pertained to the appearance of serious contact eczema linked to the use of shoes made in China, infection by *Salmonella typhimurium* after eating products containing butter and peanut butter from the United States, malaria caused by *Plasmodium vivax*, fever caused by *West Nile Virus* and other illnesses resulting from mosquito bites, such as dengue fever, yellow fever and Chikungunya fever. These etiological agents caused outbreaks in countries visited by residents of Spain and could pose a danger, since conditions for autochthonous transmission exist in Spain (presence of competent vectors and favourable climatic conditions). Cases caused by flu virus, with pandemic potential, were also monitored.

The most important alert in 2009, in terms of country-wide repercussions and the huge deployment of resources that it required, was the one occurring on 25 April 2009 due to the declaration by the WHO of the Public Health Emergency of International Importance (PHEII) following the detection of the pandemic virus (H1N1) 2009 and the subsequent declaration of pandemic. The National Plan for Preparation and Response to the Flu Pandemic and the committees and subcommittees established to respond in an organised fashion throughout the country were activated. It was decided that the CCAES would co-ordinate the technical epidemiological information and the vigilance strategies (estrategias de vigilancia)[7] as well as the recommendation of antivirals and vaccines with the technical bodies of each autonomous community, with the European Union and the WHO taking charge of data analysis, converting the data into useful information and disseminating the data through the established channels.[8]

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[6] Global Status Report on Road Safety. [http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf

[7] Influenza A. Vigilance Strategy. MSPSI. [http://www.msps.es/profesionales/saludPublica/gripeA/estrategiaVigilancia.htm]

[8] Analysis of cases caused by pandemic virus Influenza A. Spain 2009. MSPSI. [http://www.msps.es/profesionales/saludPublica/gripeA/analisisCasos.htm]

The criteria of solidarity, responsibility and equity were present during the entire communication campaign, the main objective of which was to provide a continuous line of information, for the duration of the pandemic, to the public, including all age groups and paying special attention to risk groups.

From within the Ministry of Health and Social Policy, the CCAES drew up a National Plan for the Preparation and Response to the Flu Pandemic (Plan Nacional de preparación y respuesta ante una pandemia de gripe)[9] following the guidelines established by the WHO, and it collaborated, with all the autonomous communities, in the creation of the protocols set forth in the appendices to the National Plan.[10] This National Plan proved very useful and effective in ensuring a co-ordinated and well-organised response to the pandemic (H1N1) 2009.

The CCAES also co-ordinates the epidemiological surveillance committee attached to the Public Health Commission. In this technical committee strategies are agreed upon for the surveillance of transmissible diseases included in the National Surveillance Network and agreements are made to ensure coherence in the actions taken by the autonomous communities. In 2009 this group did considerable work revising the protocols to be followed with diseases of compulsory notification at the European level.

These diseases include tuberculosis, which continues to be a public health problem worldwide. In Spain, where the incidence rate is 14.6 cases per 100,000 inhabitants, this disease remains a challenge. The Plan for the Prevention and Control of Tuberculosis,[11] was adopted by the SNS Interterritorial Council (CISNS) in 2007 with the objective of strengthening the prevention and control of tuberculosis in Spain. This Plan continued its activity in 2009, in co-ordination with the autonomous communities, INGESA and relevant scientific societies.

Vaccination

The Vaccination Programme and Register Committee, which is co-ordinated by the CCAES and the autonomous communities, has made it possible to maintain the already high level of vaccination coverage in 2009,[12] mainly in primary vaccination, where the coverage is greater than 95% for Hepatitis B and the basic series (poliomyelitis, DTaP - diphtheria-tetanus-pertussis - and Haemophilus influenzae type b -Hib-), and greater than 97% for meningococcal group C.

In relation to the coverage rates attained in 2009, it should be noted that additional information is available this year with regard to vaccination against human papillomavirus (HPV) and against the flu pandemic. Vaccination coverage against HPV in girls aged 11-14 during the 2008-2009 academic year, in the autonomous communities that furnished this information, reached a national average of 77.2%. Coverage in the case of the flu pandemic vaccine in the 2009-2010 season, at national level and by priority groups, was as follows: social and health care workers (11.6%), persons who work in essential public services (8.8%), persons with underlying pathology, by age groups (6

[9] Avian Flu. Plans for preparation and response. MSPSI.
[http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/gripeAviar/planes.htm]

[10] Recommendations and Protocols of the Public Health Commission. MSPSI.
[http://www.msc.es/servCiudadanos/alertas/protocolosCSP.htm]

[11] Plan para la prevención y control de la tuberculosis en España. MSPSI.
[http://www.msps.es/profesionales/saludPublica/prevPromocion/planTuberculosis.htm]

[12] Vaccination coverage (statistical data). MSPSI.
[http://www.msps.es/profesionales/saludPublica/prevPromocion/vacunaciones/coberturas.htm]

months to 17 years of age: 15.3%; 17 to 60 years of age: 15.1%; and 60 years and older: 28.5%) and pregnant women (9%).

Also, in 2009 the Public Health Commission of the CISNS adopted the update that the Vaccination Programme and Register Committee proposed for the area: Vaccination against diphtheria and tetanus. Adult vaccination. Recommendations.[13] This update takes into account the scientific evidence available regarding vaccination against tetanus and diphtheria in adults and makes new recommendations regarding the use of these vaccines.

As it does every year, just before the summer season, the Ministry of Health and Social Policy began the programme *"Health travels, too. 2009"* to remind people who plan to travel abroad to check with an International Vaccination Centre (IVC) to obtain personalised information, vaccination recommendations and the administration of vaccines to travellers, especially those going to tropical countries or infrequent destinations. Also, where appropriate, the IVC indicates which pharmaceutical is most suitable for chemoprophylaxis of malaria, the tropical pathology with highest relevance and for which no vaccine has been found. In 2009, the figures regarding vaccines administered were as follows: yellow fever (74,431), typhoid (58,747), diphtheria/tetanus (35,589), hepatitis A (52,527) and other illnesses (86,271).

Over the course of 2009, the IVCs, which are run by the Ministry, attended 197,121 travellers, recommending 207,299 immunisations and 105,718 anti-malarial chemoprophylaxis measures. These numbers represent an increase of 6.60% and 5.80%, respectively, over 2008. All together, the IVCs took 620,582 individualised preventive actions, three actions per traveller attended, and they responded to over 111,332 telephone calls.

Blood transfusion safety

In 2009 the Scientific Committee for Transfusion Safety (CCST), the advisory body commissioned with the task of proposing guidelines regarding transfusion safety at the national level, published a co-ordination plan for the transfusion system in relation to the Influenza A pandemic (H1N1).[14]

It also published new recommendations regarding the human variant of Creutzfeldt-Jakob disease, detection of viral genomes in blood donations, Influenza A pandemic (H1N1) and Chagas disease. In relation to the latter, a specific working group was formed to address non-endemic illnesses related to migration, and a report on Chagas disease and blood donation was published.[15]

HIV infection

The Multisector Plan against HIV infection and AIDS 2008-2012[16] describes the policies and instruments that the country uses to fight HIV infection.

The data analysed was furnished by the systems put in place for the surveillance of new HIV diagnoses in the autonomous communities of Baleares, Canarias, Cataluña,

[13] Public Health: Vaccination recommendations. MSPSI. [http://www.msps.es/profesionales/saludPublica/prevPromocion/vacunaciones/recoVacunasAdultos.htm]

[14] Transfusion system. Co-ordination Plan. Influenza A pandemic (H1N1). MSPS. [http://www.msc.es/profesionales/saludPublica/gripeA/docs/Plan_Sistema.pdf]

[15] Chagas disease and blood donation. MSPS. [http://www.msps.es/profesionales/saludPublica/medicinaTransfusional/publicaciones/docs/informeChagasJulio09.pdf]

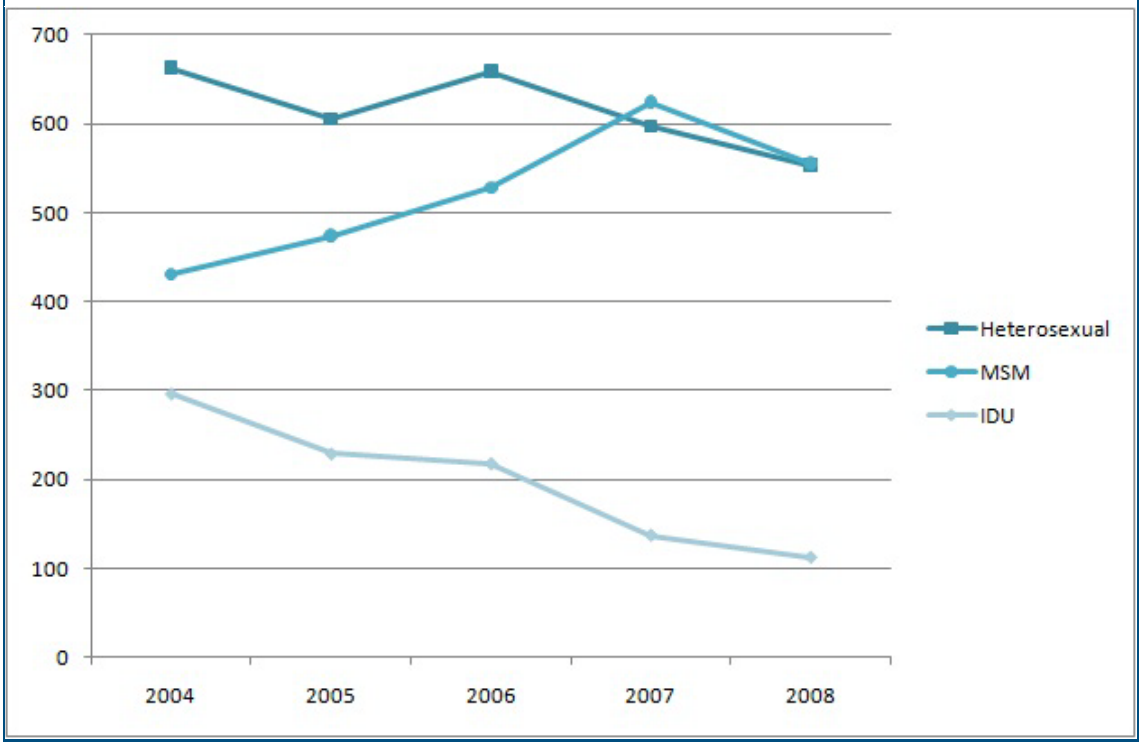
[16] Multisector Plan against HIV infection and AIDS. MSC. []

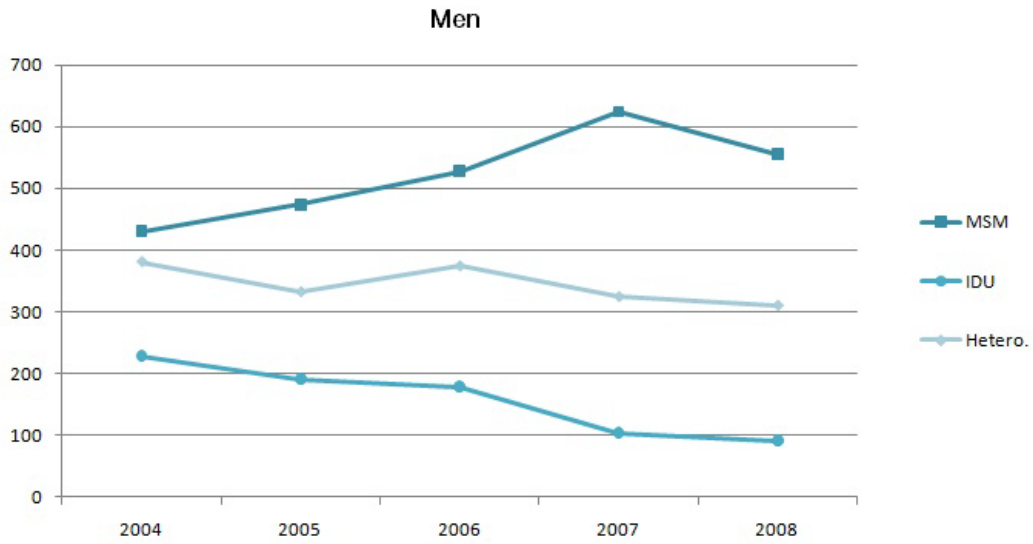
Extremadura, La Rioja, Navarra, País Vasco and Ceuta since 2003, with the incorporation of Galicia in 2004, and of Aragón, Asturias and Melilla in 2008.

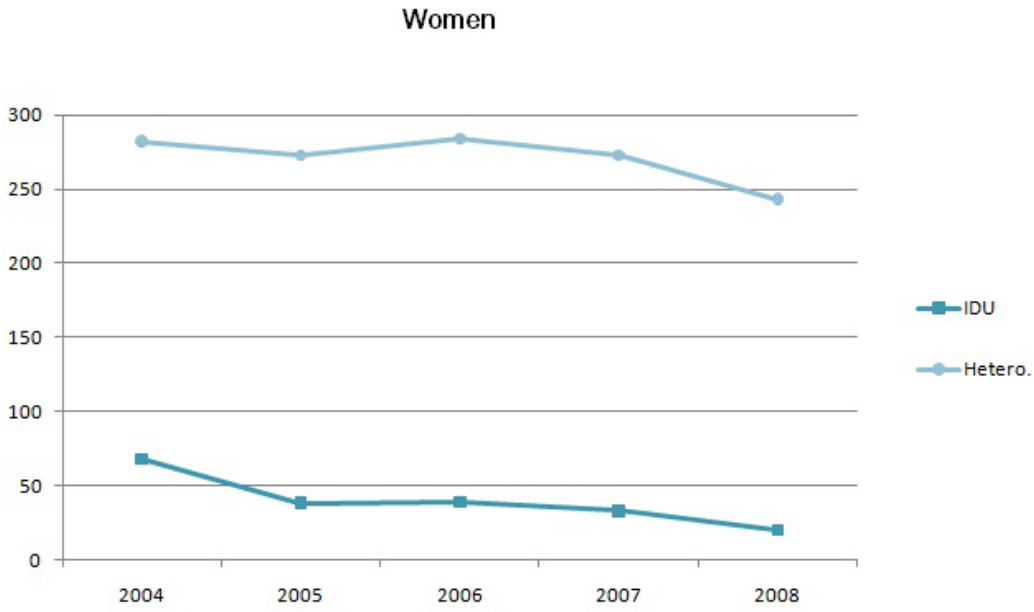
The results of the last period analysed, 2008, indicate that the rate of new HIV diagnoses in Spain is at a similar level to that of other countries in Western Europe. However, despite this undeniable improvement in the situation compared to past decades, in the period analysed there seems to be a tendency towards stabilisation in the number of new diagnoses. The epidemiological patterns of the transmission of this virus have changed completely. While in the past most new infections were caused by the sharing of drug injection equipment by intravenous drug users, now HIV is transmitted mostly by unprotected sex.

In the overall analysis of the available data, unprotected sex between men (MSM) occupies first place in terms of the probable mechanism of infection in men (whether Spanish or from other countries). In women and in people from other countries, the most frequent mechanism is unprotected heterosexual sex (Figure 4.1).

Figure 4.1 **Annual number of new HIV diagnoses in Spain, by transmission category and by sex, 2004-2008.**



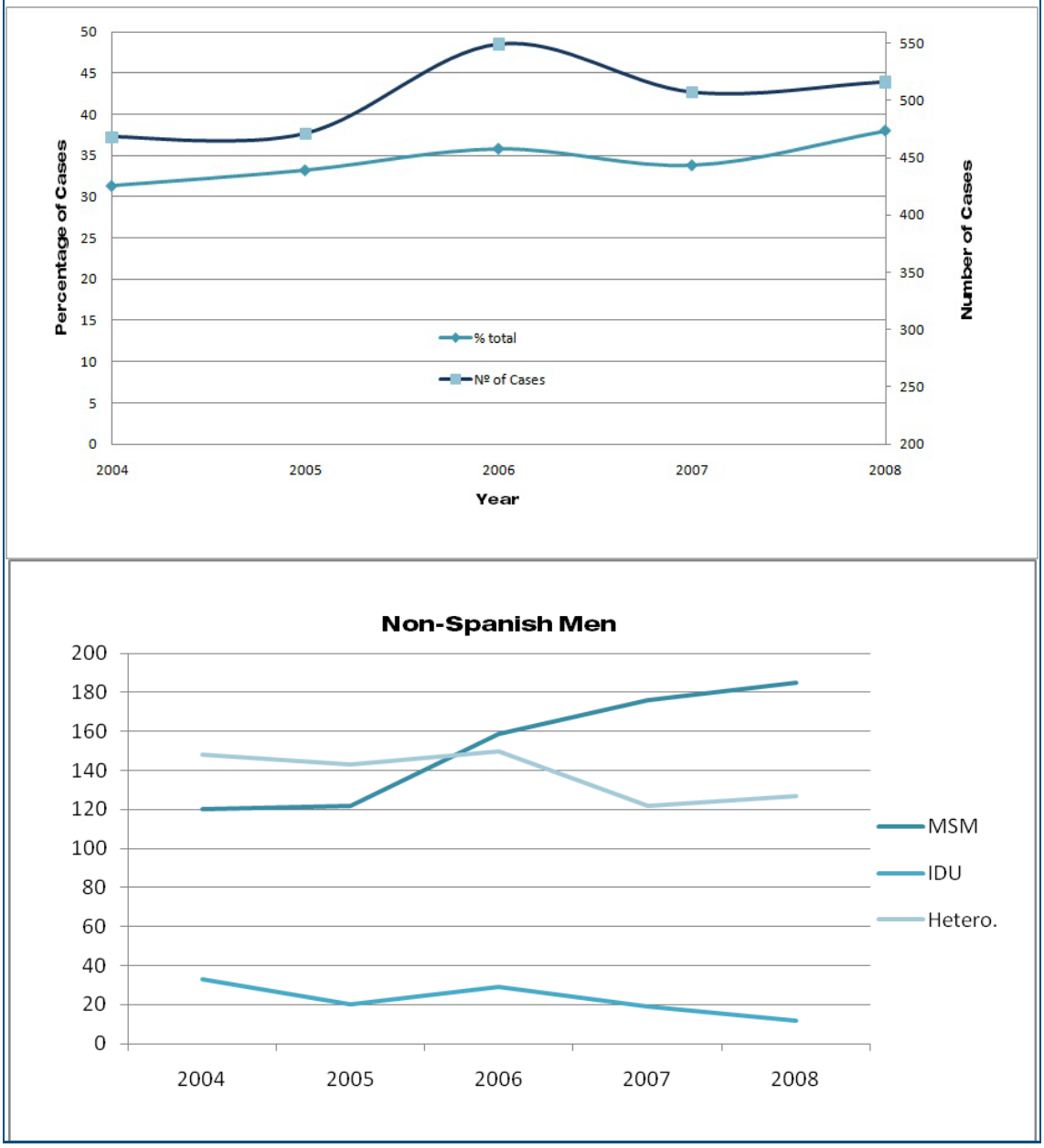


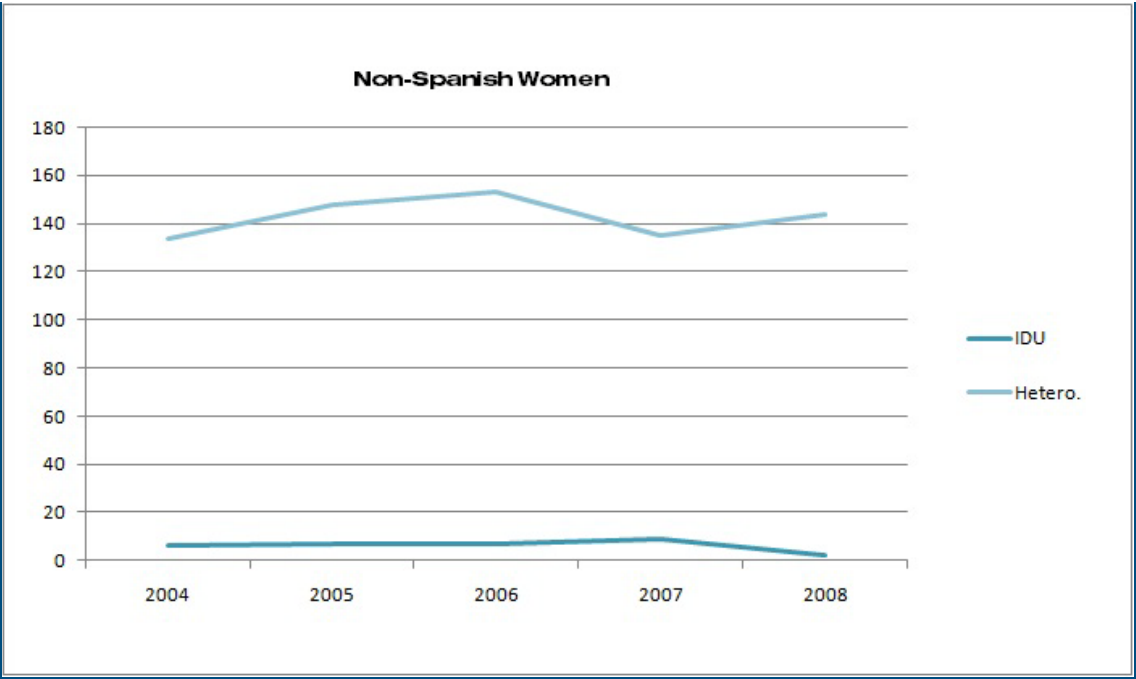


Notes	IDU: intravenous drug users. MSM: men who have sex with men. Results of the analysis of data furnished by the systems for the surveillance of new HIV diagnoses in the autonomous communities of Baleares, Canarias, Cataluña, Extremadura, La Rioja, Navarra, País Vasco and Ceuta since 2003, with the incorporation of Galicia in 2004 and of Aragón, Asturias and Melilla in 2008. Updated on 30 June 2008.
Source	National AIDS Plan Secretariat. DG of Public Health and Border Health Control. MSPSI.

These findings point to the need to introduce and reinforce effective actions against sexual transmission of HIV, adapting them to current circumstances. Persons not of Spanish nationality represent over one third of the new HIV diagnoses, a result of Spain's growing immigrant population in recent years. This fact underlines the necessity of diversifying prevention programmes and adapting them to the needs of this very socially and culturally heterogeneous group, which is especially vulnerable (Figure 4.2).

Figure 4.2 **Number and percentage of new diagnoses of HIV in people from other countries, as a whole and by sex, 2004-2008.**





Notes	IDU: intravenous drug users. MSM: men who have sex with men The results presented are from the analysis of data furnished by the systems established for the surveillance of new HIV diagnoses in the autonomous communities of Baleares, Canarias, Cataluña, Extremadura, La Rioja, Navarra, País Vasco and Ceuta since 2003, with the incorporation of Galicia in 2004, and of Aragón, Asturias and Melilla in 2008.
Source	National AIDS Plan Secretariat. DG of Public Health and Border Health Control. MSPSI.

In the year 2008, 30% of new cases already showed a severe degree of immunodepression. The promotion of early diagnosis, targeting the population as a whole and also health professionals, must therefore be a high priority, so as to obtain the maximum benefit, individually and collectively, from advances in the prevention and treatment of HIV infection.

Adhesion to the system for notification of new diagnoses of HIV infection by Galicia in 2004 and by Aragón, Asturias and Melilla in 2008, has improved the representativeness of the data. However, obtaining country-wide data remains vitally important if we are to understand the situation of HIV infection in Spain with greater precision and thus be able to better adapt the interventions.

All autonomous communities engage in primary and secondary prevention activities with regional funds and with funds transferred from the Ministry (a total of 32,437,480 Euros come from the latter to support such activities). The funds from the Ministry in the 2001-2008 period are detailed in Table 4.2. In addition, non-governmental organisations (NGOs) working in this area have undertaken a number of actions, financed largely by the subsidies granted by the Ministry of Health and Social Policy.

Table 4.2 **Total budget in Euros for HIV prevention, psychological support and social support for affected persons in Spain, 2001-2008.**

	2001	2002	2003	2004	2005	2006	2007	2008
SPNS direct activities	6,036,904	6,410,300	6,109,790	6,122, 030	6,121,240	6,126,000	6,226,000	6,303,000
Transfers MSPSI- Aut. Comm.	4,808,096	4,808,100	4,808,099	4,808,100	4,808,100	4,808,100	4,808,100	4,808,100
Subsidies MSPSI-NGO	943,733	943,730	943,730	1,003,830	1,603,830	3,152,000	4,152,000	4,152,000
Subsidies from the NGO donation option on the PIT return.	2,788,215	2,649,321	2,651,121	2,766,292	2,773,598	2,879,194	2,923,694	3,047,119
Subtotal central government	14,576,948	14,811,451	14,512,650	14,700,252	15,306,768	16,965,294	18,109,794	18,310,219
Direct activities of Regional AIDS Plans	5,650,507	5,139,702	5,014,636	6,251,638	6,160,249	5,153,502	5,656,629	5,107,996
Regional NGO-AIDS Plans	3,279,156	3,681,613	4,172,150	4,327,313	5,852,761	7,574,267	8,273,264	9,102,265
Subtotal regional governments	8,929,663	8,821,315	9,186,786	10,578,951	12,013,010	12,817,769	13,929,893	14,127,261
TOTAL	23,506,611	23,632,766	23,699,436	25,279,203	27,319,778	29,783,063	32,039,687	32,437,480

Notes Includes costs of staff from public administrations working temporarily on this project and of staff hired in autonomous communities with the transferred funds, for limited periods of time. Does not include costs of civil servants.
SPNS: National AIDS Plan Secretariat.

Source Report on Prevention Activities by the Autonomous Communities (ICAP) 2009.

Some of the actions undertaken by the autonomous communities in relation to HIV prevention in 2009 are detailed in Table 4.3.

Table 4.3 **Actions by autonomous communities in setting up and implementing plans and programmes related to HIV/AIDS, 2009.**

	ACTIONS UNDERTAKEN
Andalucía	- Continuation of "AIDS Programme 2008-2012." http://www.juntadeandalucia.es/salud/sites/csalud/portal/index.jsp?idioma=es&perfil=org&opcion=listadoTematico=/temas_es/P_2_ANDALUCIA_EN_SALUD_PLANES_Y_ESTRATEGIAS/&desplegar=/temas_es/P_2_ANDALUCIA_EN_SALUD_PLANES_Y_ESTRATEGIAS/&menu=S http://www.juntadeandalucia.es/salud/vih (for the general population) http://www.juntadeandalucia.es/salud/vihprofesionales (for health professionals)
Aragón	- Educational campaign to promote condom use for the prevention of STDs and unwanted pregnancy among the immigrant population.
Baleares	- Implementation of rapid HIV detection test at all drug treatment centres in Mallorca.
Canarias	- Continuation of programmes for the early detection of HIV/STD, medical/ psychological/social support for people with HIV, prevention in sex workers (begun in 2003) and of the co-ordination and collaboration with NGOs working in the area of HIV/AIDS (begun in 1999). Promotion of safe sex practices. www.gobiernodecanarias.org/sanidad/scs/sida.htm. - Training programme in STD/HIV/AIDS, conference on AIDS prevention in the armed forces, training courses for educators specialised in socio-cultural activities, update in HIV/AIDS and syphilis knowledge for the regional blood donation and haemotherapy centre. - Beginning of the research project "Monitoring the prevalence and incidence of HIV in vulnerable populations. (Epi-HIV Group)" 2009-2011.
Cantabria	- Campaign for the early detection of HIV/AIDS "If you're not sure, get tested" 2009- 2010. - Incorporation of the rapid HIV detection test (pilot phase 2009-2010). - Beginning of the information system for new HIV diagnoses.
Castilla y León	- Continuation of sectorial plan for the prevention and control of AIDS and of HIV-related infections, which began in 1994, in co-ordination with the Multisectorial Plan to combat HIV/AIDS of the MSPS, 2008-2012. (http://www.salud.jcyl.es/sanidad/cm/ciudadanos/tkContent?pgseed=1274335621252&idConte

	nt=465&locale=es_ES&textOnly=false) - Implementation of first annual needle-exchange programme.
Castilla-La Mancha	- Annual campaign to commemorate “World AIDS Day” and organisation of the conference "Keys in HIV/AIDS intervention in Castilla-La Mancha" in collaboration with the Health Education Foundation (FUNDADEPS). - Annual free distribution of condoms and needle kits campaign. - Call for applications seeking subsidies for NGO programmes in AIDS prevention and control in 2009.
Cataluña	- Follow-up, extension and update of programmes related to prevention, control and care for persons affected by HIV/AIDS and other STDs: Extension of prevention programmes targeting sex workers and their clients, begun in 1992; Extension of prevention programmes targeting ethnic minorities and immigrants, begun in 1992; Update of the DIDA programme, which provides milk to the babies of seropositive mothers during the first year of life, begun in 1999; Follow-up of the facial lipoatrophy treatment programme begun in 2008. - http://www.gencat.cat/salut/depsalut/html/ca/dir3538/5programa_sida.pdf - Update of programme to increase condom accessibility (Programa Máquina), begun in 2003. - http://www.gencat.cat/salut/depsalut/html/ca/sida/doc6363.html - Initiation of the AIDS awareness and prevention campaign among the young gay population. Fuck you, AIDS. http://www.fuckyousida.com - Beginning of rapid HIV detection tests in pharmacies. - http://www.gencat.cat/salut/depsalut/html/ca/dir1992/doc30582.html - New publications of "Infosida" issues 37, 38 and 39, “Pharmacological guide to HIV” and a brochure on syphilis. Update of “Recull de recursos de dinamització pels joves”. - http://www.gencat.cat/salut/depsalut/html/ca/dir2138/index.html - http://www.gencat.cat/salut/depsalut/html/ca/dir3042/sifilis_cat_02_3.pdf - http://www.gencat.cat/salut/depsalut/html/ca/dir2068/guiafarmacvih.pdf - http://www.gencat.cat/salut/depsalut/pdf/droguessida.pdf
Comunidad Valenciana	- Annual evaluation of Regional AIDS Plan, begun in 1997. http://biblioteca.sp.san.gva.es/biblioteca/publicaciones/MATERIAL/PUBLICACIONES/SIDA/SIDA/PLAN_DEL_SIDA.PDF - Annual campaigns to heighten citizen awareness of HIV/AIDS prevention in the region. - Call for applications seeking subsidies for programmes/activities aimed at AIDS prevention and for associations offering self-help and psychosocial support to the HIV-positive community.
Extremadura	- Continuation of the “Education for Health Programme” through subsidies granted to social care projects for the prevention of STDs and HIV/AIDS and for collaboration with the Association of Popular Universities in Extremadura (AUPEX) to promote health awareness in the segment of the population that has received no formal education. - As part of the “HIV/AIDS prevention programme” a subsidy was granted to the Extremadura Triangle Foundation to promote safe sex practices in men who have sex with men. Implementation of the programme “Stop wondering” through an agreement with the Citizen anti-AIDS Committee of Extremadura (CAEX), to promote rapid HIV testing so as to bring about early detection outside the health care system. - Continuation of “Programme for the Integration in Society and at the Workplace of people living with HIV/AIDS” and of the “Programme for personal care in HIV/AIDS” which offers care to people living with AIDS through an agreement signed with CAEX. - Informative campaigns about HIV aimed at the general public and at health professionals, using brochures and IT. Call for applications seeking grants for research in the field of social aspects of HIV/AIDS. - Continuation of lipodystrophy treatment in HIV/AIDS patients (Hospital San Pedro de Alcántara), antiretroviral treatment for persons with HIV/AIDS, and assisted reproduction for serodiscordant couples, through an agreement with another autonomous community.
Galicia	- Publication of the First Report by the Regional Information System on HIV Infection (SIGIVIH)” 2004-2008. - http://www.sergas.es/MostrarContidos_N3_T02.aspx?IdPaxina=61154&uri=http://www.sergas.es/gal/DocumentacionTecnica/docs/SaudePublica/sida/VIH-Sida_gallego_2009.pdf&hifr=1250&seccion=0
Madrid	- Acquisition and distribution of rapid tests in non-clinical settings and research project on the acceptance of these tests in such settings 2009-2010. www.madrid.org - Conclusion of study "Promoting, in the hospital setting, healthier practices among people living with HIV” 2008-2009. - Purchase and annual distribution of condoms and lubricants. Publication/republication of materials for purposes of information, education and communication (IEC strategy). www.publicaciones-isp.org - Continuation of actions related to the European project "Everywhere" 2008-2010. www.everywhereproject.eu - Beginning of HIV prevention and early diagnosis services in primary care 2009-2011. - Courses organised to update the HIV/AIDS skills of primary care professionals. Conference for

	professionals who work in HIV hospital units. Training courses for people who occupy technical positions in NGOs 2009-2010. - Continuation of actions aimed new AIDS case reporting and the monitoring of already reported cases. - Continuation of individualised surveillance of HIV infection based on an agreement for the study of a cohort of HIV patients in the south-east area of metropolitan Madrid (COMESEM) who receive care at their reference hospitals. There have been meetings with the people in charge of CORIS (Cohort of the Network of AIDS Research), to include data from hospitals in Madrid. Soon a statement will be issued in which HIV is declared to be a disease of compulsory notification (DCN). The register currently contains 1720 patients. - Continued vigilance in the area of vertical transmission of HIV, through regular data collection from hospital paediatrics services on babies born to HIV-positive mothers, emphasising the effect of prophylaxis with antiretrovirals. - Co-ordination and continuation of the collaboration agreement with the Spanish Red Cross (Madrid office) for the creation of networks of mobile treatment units for the direct supervision of patients with tuberculosis and/or HIV/AIDS, who are at risk of not adhering to their treatment programme. - Continuation of health care at Centro SANDOVAL for HIV/AIDS patients who do not want to go or have difficulty accessing the normal public health care network (diagnosis and follow-up, including viral load, individualised health education, psychosocial support) and continuation of specific programme for serodiscordant couples.
Murcia	- Implementation of the programme for AIDS information and health education, following the guidelines of the "Multisectorial Plan to combat HIV/AIDS infection 2008-2012" of the MSPSI. - AIDS information hotline: in 2008 a total of 383 calls were attended, with an accumulated total of 8281 calls - AIDS information consultation. In 2008, a total 349 consultations were received, with an accumulated total of 5321 consultations. - Management of agreements aimed at the prevention of HIV infection - Prevention of HIV-infection at schools, in specific groups and in the general population.
Navarra	- Introduction and implementation of protocols for facial lipodystrophy and semen washing. - Rapid HIV testing in pilot stage.
País Vasco	- Rapid HIV test available at pharmacies. www.euskadi.net/sida
La Rioja	- Continuation of actions related to "Multisectorial Plan to combat HIV/AIDS infection 2008-2012" - Continuation of agreement signed with Citizen Anti-AIDS Committee of La Rioja for actions in the area of prevention, promotion and psychosocial support. - Annual hospital survey about patients, activities and resources aimed at HIV/AIDS.
Ceuta and Melilla	- Continuation of "Programme for the prevention and control of HIV-AIDS" begun in 2005.
Source	Information provided by the autonomous communities and INGESA for this report.

The National Aids Plan Secretariat (SPNS) carried out two campaigns; one specifically for men who have sex with men, with Internet distribution and close collaboration with official organisations of lesbians, gays, transsexuals and bisexuals, and another on the occasion of World AIDS Day. Also, with a view to improving care quality, in 2009 the SPNS published, in collaboration with a total of 116 SNS experts and six scientific societies, the following documents:

— Recommendations regarding metabolic alterations in HIV-positive patients (March 2009).[17]

— Recommendations by the AIDS Studies Group (GESIDA) and SPNS regarding antiretroviral treatment in HIV-positive adults (updated January 2010).[18]

[17] Recomendaciones sobre alteraciones metabólicas en pacientes con infección por el VIH (marzo 2009). [http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/sida/docs/recomendacionesAlteracionesMmetabolicasMar09.pdf]

[18] Documento de consenso de GESIDA/SPNS respecto al tratamiento antirretroviral en adultos infectados por el virus de la inmunodeficiencia humana (Actualización enero 2010). [http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/sida/publicaciones/profSanitarios/DocConsensoTARGESIDAPNSEne2010.pdf]

— Recommendations for the evaluation and treatment of kidney alterations in HIV-positive patients.[19]
— Recommendations by CEVIHP/SEIP/AEP/SPNS for treatment of HIV-positive children (June 2009).[20]
— Recommendations regarding treatment and handling of adult patients co-infected with HIV and Hepatitis A, B and C (September 2009).[21]

Firm steps were also taken towards the monitored, limited use (prior to its possible inclusion in the common benefits package) of facial lipoatrophy treatment, as a fundamental part of achieving full social integration of people with HIV.

In 2009 the Foundation for AIDS Research and Prevention in Spain (FIPSE) made its 10th call for applications for grants for FIPSE research projects. A total of 102 proposals were received, requesting more than 15 million Euros in funds. Ninety-three of these projects were evaluated and after third-party evaluation 18 research proposals were selected. Of the projects that received funding, nine were in the area of basic research, six in the area of clinical research, two in the area of epidemiological and preventive research and one was related to social aspects. The funds devoted to these projects total 2,122,637 Euros. FIPSE funding, in addition to enabling research to be performed and quality results to be obtained in Spain, is also serving as an important means of practical research training for many SNS professionals.

This year the SPNS also allotted a specific budgetary item to the Clinical Trials Agency of GESIDA, in the amount of 77,000 Euros, to promote clinical research performed by Spanish researchers, by carrying out clinical trials, observational studies, methodological consulting and scientific publications.

Spain is also involved in the project ESTHER (*Ensemble pour une Solidarité Therapèutique Hospitalière En Réseau*).[22] Its participation takes the form of Spain, through the MSPSI, working with six Latin American countries to improve the technical capacity of professionals in relation to HIV and to create a network of trainers throughout the countries involved in the project. Developing closer relationships among the professionals of the different countries is also one of the project's objectives, as this foments joint projects and knowledge exchange. In 2009, training activities took place in Ecuador and Honduras and Latin American professionals also came to Spain for training visits at SNS hospitals.

[19] Recomendaciones para la evaluación y el tratamiento de las alteraciones renales en pacientes con infección por el VIH.
[http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/sida/publicaciones/profSanitarios/recoEvalTtoRinonVIH25062009.pdf]

[20] Recomendaciones CEVIHP/SEIP/AEP/SPNS para el seguimiento del paciente pediátrico infectado por el Virus de la Inmunodeficiencia Humana (VIH). Junio de 2009.
[http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/sida/publicaciones/profSanitarios/recoSeguimientoPediatricoVIHJunio09.pdf]

[21] Recomendaciones de gesida / pns / aeeh sobre tratamiento y manejo del paciente adulto coinfectado por VIH y virus de las hepatitis A, B y C. (Septiembre de 2009)
[http://www.gesida.seimc.org/pcientifica/fuentes/DcyRc/gesidadcyrc2009_coinfectadosvihvhc.pdf]

[22] ESTHER project. MSPSI.
[http://www.msps.es/ciudadanos/enfLesiones/enfTransmisibles/sida/cooperacionInt/home.htm]

Health in pregnant women, newborns, children and adolescents

In 2009 considerable work went into the creation of the new Spanish Law on Sexual and Reproductive Health and the Elective Termination of Pregnancy,[23] preparing contents about accredited health care centres, mandatory reports, information and data transmission systems, epidemiological statistics and information on elective termination of pregnancy (ETOP) and the information provided prior to patient consent in cases of elective termination of pregnancy.[24]

The final data regarding ETOP in 2008 was published (Table 4.4 and Table 4.5) and preparation of 2009 data began, based on the analysis of the statistical-epidemiological information gathered.

Table 4.4 Number of ETOP by age group and autonomous community of residence, 2008.

		Age							
	TOTAL	<15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	>44 years
TOTAL	**115,812**	**475**	**14,464**	**28,389**	**28,859**	**22,745**	**14,944**	**5,519**	**417**
Andalucía	20,574	104	3,094	5,492	4,940	3,601	2,397	892	54
Aragón	3,280	7	357	812	821	682	441	148	12
Asturias	1,679	4	177	413	433	340	207	99	6
Baleares	3,387	12	365	766	890	720	457	157	20
Canarias	4,882	35	637	1,084	1,164	939	719	280	24
Cantabria	728	1	83	150	185	145	113	49	2
Castilla-La Mancha	3,655	19	532	929	837	677	491	151	19
Castilla y León	3,336	22	515	890	763	579	388	171	8
Cataluña	25,379	67	2,663	6,091	6,562	5,338	3,369	1,206	83
Comunidad Valenciana	11,580	53	1,572	2,734	2,887	2,323	1,423	535	53
Extremadura	1,383	6	259	387	282	212	155	79	3
Galicia	1,981	9	287	486	441	366	274	105	13
Madrid	22,126	67	2,430	5,359	5,686	4,463	2,975	1,074	72
Murcia	5,350	30	639	1,303	1,461	1,090	601	214	12
Navarra	765	4	107	156	183	148	127	37	3
País Vasco	2,996	7	313	670	751	632	439	171	13
La Rioja	597	1	70	133	148	124	85	34	2
Ceuta	15	0	2	4	0	5	1	3	0
Melilla	87	1	16	29	22	8	4	7	0
In other countries	2,031	25	346	501	403	353	278	107	18
Unknown	1	1	0	0	0	0	0	0	0

Source Sub-Directorate General of Health Promotion and Epidemiology. MSPSI.

[23] Ley Orgánica 2/2010, de 3 de marzo, de salud sexual y reproductiva y de la interrupción voluntaria del embarazo. [http://www.boe.es/boe/dias/2010/06/30/pdfs/BOE-A-2010-3514.pdf]

[24] Sexual and reproductive health and elective termination of pregnancy. [http://www.msps.es/novedades/saludSexualIVE/home.htm]

In relation to the health of children and adolescents,[25] it is worth noting that Spain participated with UNICEF in a working group established to conduct a research project on the indicators of child well-being in Spain[26] and with the Children's Observatory, in the working groups of the National Strategic Plan for Childhood and Adolescence (PENIA)[27] (one group was devoted to child abuse and the other to co-existence and social inclusion).

Table 4.5 **Number of ETOP in women under the age of 20, by autonomous community of residence, 1999-2008.**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Andalucía	1,782	1,838	2,117	2,272	2,500	2,794	2,979	3,096	3,281	3,198
Aragón	190	194	246	268	255	281	336	354	394	364
Asturias	196	265	198	213	216	242	211	220	178	181
Baleares	271	306	341	356	320	349	357	383	438	377
Canarias	438	473	641	609	574	595	641	714	781	672
Cantabria	56	60	53	55	53	58	58	69	57	84
Castilla-La Mancha	237	237	252	270	289	319	398	437	494	551
Castilla-León	348	332	377	380	400	420	416	440	499	537
Cataluña	1,818	1,941	1,938	2,010	2,015	2,117	2,158	2,394	2,657	2,730
Comunidad Valenciana	892	998	1,047	1,101	1,071	1,209	1,288	1,452	1,637	1,625
Extremadura	150	159	184	196	169	236	238	236	245	265
Galicia	367	362	349	356	363	375	399	362	400	296
Madrid	1,100	1,161	1,265	1,535	1,616	1,765	1,928	2,227	2,530	2,497
Murcia	218	309	331	365	374	397	471	478	600	669
Navarra	42	56	40	52	56	70	93	74	95	111
País Vasco	185	168	150	168	193	217	248	283	356	320
La Rioja	37	35	35	45	48	46	57	53	55	71
Ceuta and Melilla	23	20	17	23	21	19	29	19	24	19

Source Sub-Directorate General of Health Promotion and Epidemiology. MSPSI.

4.2 Cross-border control and international health

Evaluation of health risks derived from the international movement of travellers and goods

With regard to the international traffic of corpses and cadaverous remains, organs for transplant and anatomical preparations used in research, in 2009 a total of 2939 records

[25] Report on the National Action Plan for Social Inclusion in Spain 2008-2010. [http://www.msps.es/politicaSocial/inclusionSocial/docs/2009_2_pnain_2008_2010_anexo_ii_informe_ejecucion_medidas.pdf]

[26] Proposal for a System of Indicators regarding child well-being in Spain. [http://www.scribd.com/doc/34873818/Propuesta-de-un-sistema-de-Indicadores-sobre-Bienestar-Infantil-en-Espana]

[27] Plan Estratégico Nacional de la Infancia y Adolescencia 2006-2009 (PENIA). Ministry of Labour and Social Affairs (MTAS). [http://tv_mav.cnice.mec.es/pdf/Plan_Estrat_Inf_Ad.pdf]

of transfer of corpses, human remains and cadaverous remains either entering or exiting Spain were processed. Over the course of 2009, a total of 221 entry and exit authorisations were issued for organs and tissue for transplant, compared to the 263 of 2008, in collaboration with the Spanish National Transplant Organisation. Of them, almost 60% (130) were umbilical cord blood, while the remaining 40% (91) were peripheral blood (44), bone marrow (18), vascular segments (12), muscle-tendon tissue (8), corneas (4), pulmonary valves (2), lymphocytes (2) and one aortic valve. In 2009, 22 entry authorisations were granted for different anatomical parts to be used in Spain for scientific, teaching or research purposes.

Since the publication of Royal Decree 65/2006, of 30 January 2006, which lays down the requirements for the import and export of biological samples, there has been an exponential increase in such authorisations for purposes of research and/or diagnostics in humans. Thus, from the 790 import and export authorisations issued in 2006, the figure for 2009 is 1530, an increase of 93.67% in just three and a half years. Thirty-one entries have been made in the registry of importers (compared to 12 in 2006) and 252 in the registry of exporters (181 in 2006).

Finally, in relation to the international transport of products for human use and consumption –imports, in 2009 Spanish customs agents checked 121,471 consignments of products for human consumption (compared to 113,799 in 2008), of which 44,394 were submitted to physical inspection. Of the latter, samples of 1,692 consignments were taken in order to perform laboratory analysis, producing a total of 3,359 analytical determinations. Out of the total of consignments checked, 818 were rejected (0.67%).

International alerts

In 2009, as part of its efforts to regularly inform the International Vaccination Centres (IVCs) about international health incidents that may affect the preventive measures to be taken with persons travelling to affected countries, the health alert network of the Department of Border Health Control informed such centres of a total of 274 international health alerts. The clear increase over the preceding year is due to the Influenza A pandemic (H1N1).

Seventy-three different countries were involved, including: Argentina (7 alerts); Bolivia (6 alerts); Brazil (8 alerts); Burkina-Faso (2 alerts); Canada (26 alerts); Congo (9 alerts); Ivory Coast (4 alerts); Costa Rica (24 alerts); China (8 alerts); U.S. (57 alerts); Egypt (25 alerts); Philippines (6 alerts); India (3 alerts); Indonesia (5 alerts); Mexico (59 alerts); Nigeria (7 alerts); Paraguay (2 alerts); Turkey (1 alert); Uganda (2 alerts); Venezuela (8 alerts); Vietnam (8 alerts) and Zimbabwe (7 alerts).

The number of pathologies involved was 30. The following are of particular relevance: 164 alerts for Influenza A (H1N1), 41 for bird flu, 34 for Dengue Fever, 21 for Meningococcal meningitis, 20 for Yellow Fever, 14 for Malaria, 14 for Chikungunya Fever, 12 for Cholera, 11 for Ebola Hemorrhagic Fever and 7 for Acute Poliomyelitis.

In relation to goods, in 2009 a total of 436 new alerts were announced: 417 in reaction to notifications received through the Rapid Alert System for Food and Feed (RASFF) (rejections at EU borders and internal market controls) and 11 as the result of checks taking place at Spanish customs posts. Of the total of new alerts, 144 involved products of animal origin (33%) and 292 involved products not of animal origin (67%). The products affected by the active alerts are submitted to official control (consisting of document, identity and physical inspection) in 100% of the consignments.

Sanitation control activities at border posts and in international means of transport

The increase in both the number of travellers from third countries and in the number of Spanish travellers who visit risk areas points to the need to intensify prevention measures to avoid the risk associated with imported pathologies and emerging and re-emerging diseases.

To this end, in 2009 routine inspections were performed in international means of transport and at port and airport facilities: sanitation control certificates (60), sanitation control exemption certificates (1745), vessel registration (424), first-aid kit inspections (433), insect eradication (254), document checks (6967), certificates of free circulation (259), water analysis (2516) and inspection of places used for food preparation in ports and airports (367).

In addition, 364 alerts were attended, understanding alerts as health care actions derived from a maritime health declaration specifying some health-related matter that must be addressed, or derived from any other source of information (care provision, disembarkation of sick people or corpses…). In this case, the most relevant actions taken were the consequence of the Influenza A (H1N1) pandemic, which was the first event declared to be a public health emergency of international importance under the new International Health Regulations-2005 (IHR-2005), the only health legislation binding at the international level and whose purpose is to protect against the international spread of diseases while avoiding unnecessary interference with international traffic and trade.

The cross border health control actions took place during phases 4 and 5 of the H1N1 pandemic, which called for health checks at airports that received flights from infected countries (at first only Mexico was considered affected, although the United States was included later).

Checks were performed on 1210 flights; 459 involved personal checks while 751 focused on documentary checks. Over 205,000 travellers were affected. Thrity-six travellers were found suspicious and six of them were sent to hospitals. Forty-four Red Cross stations were installed at 32 airports, where more than 86,000 information sheets were distributed. A total of 945 contacts were identified on 36 flights; 597 were notified to the autonomous communities and other countries to allow follow-up actions to be taken.

The characteristics of the virus made it impossible to avoid its entry into Spain, but a high number of contacts were identified, for which vigilance measures were put in place. This likely slowed the increase in the number of cases in Spain.

4.3 Environmental health

Chemical, biocidal and phytosanitary products

In 2009, efforts were devoted to developing the structures needed to fulfil Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, of 18 December, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals in

aspects related to human health, the REACH Regulation.[28] [29] Spain also participated in developing the security measures that will be required in order to access the computer system REACH-IT, in the group named Security Officers Network and in the preparation of the project REACH Information Portal for Enforcement (RIPE) developed by the European Chemicals Agency (ECHA), to give competent authorities access to the information that will allow them to perform inspection and control tasks as prescribed by REACH.

Over the course of 2009, a database was created to manage the information sent by the ECHA about companies in Spain that have pre-registered the substances they manufacture in or import into Spain, since the REACH-IT network is not yet operative for the authorities. The 2289 companies established in Spain have presented a total of 91,161 pre-registrations. Regarding notifications made prior to the passing of the REACH regulation,[30] notifiers requested and obtained a total of 103 registration numbers, as provided in Art. 24 of the regulation.

In 2009, the dossier for the identification of 2.4-Dinitrotoluene, as a highly-dangerous substance (category 2 carcinogen), was developed and approved by ECHA.

As regards participation in ECHA committees and within the member state committee, 15 proposals were evaluated for the identification of highly dangerous substances and were passed unanimously.

In addition, activities were organised in relation to the first European inspection project REACH-EN-FORCE-1,[31] which is focused on manufacturers and importers and was passed in 2009 in the Information Exchange Forum on the monitoring of REACH compliance.

In the area of legislative activities, a bill was drafted to lay down provisions on the penalties for infringement, as called for in Regulation (EC) no. 1907/2006 of the European Parliament and the Council, which was presented to the Council of Ministers on 12 June 2009. Also, on 20 January 2009, Regulation No. 1272/2008, of the European Parliament and the Council, on the classification, labelling and packaging of substances and mixtures (CLP), went into effect, and the procedure for the harmonisation of classification and labelling described therein is now applicable.

The register of biocidal products is available on Internet, making transparent information available to the sector's professionals and citizens in general. In 2009, an average of 65 consultations regarding biocidal products were received per week. These consultations were made in person, on the telephone or in writing, by industry, autonomous communities and private individuals. Seventy-five decisions were issued in recognition of authorisation of zoosanitary/biocidal products by another member state, for subsequent registration by the Ministry of the Environment and Rural and Marine Affairs, with 37 new recognitions and 38 renewals of previous recognitions (registro de biocidas[32]).

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[28] Regulatory framework for the management of chemicals (REACH). European Chemicals Agency. [http://europa.eu/legislation_summaries/internal_market/single_market_for_goods/chemical_products/l21282_es.htm]

[29] Information from the guides on the different processes established under the regulatory framework for the management of chemicals (REACH). [http://www.msps.es/ciudadanos/saludAmbLaboral/prodQuimicos/sustPreparatorias/reach/iAcGuias.htm]

[3030] REACH information portal. [http://www.mspsi.es/ciudadanos/saludAmbLaboral/produQuimicos/sustPreparatorias/reach/introduccion.htm]

[31] Announcement of the publication of the results of the first European inspection Project REACH En Force 1. [http://echa.europa.eu/doc/press/pr_10_10/pr_10_10_FORUM_es_1_06_10.pdf]

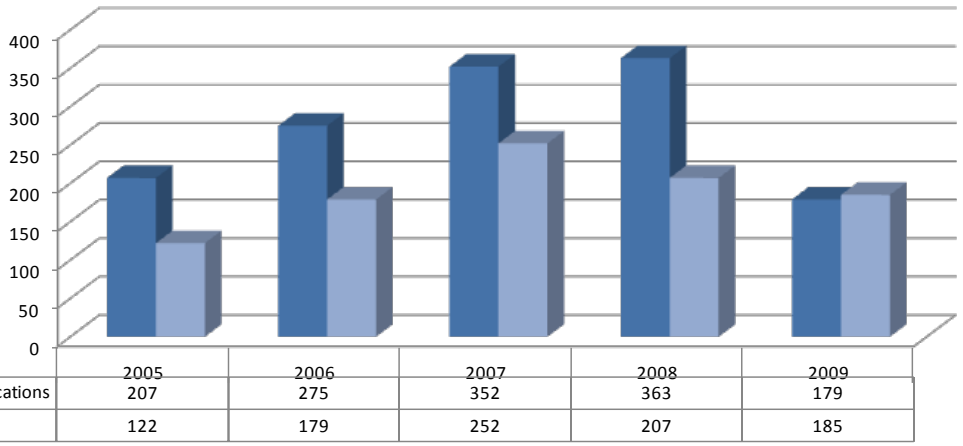
[32] Information regarding the registry of biocidal products. MSPSI. [http://www.msps.es/ciudadanos/saludAmbLaboral/prodQuimicos/sustPreparatorias/biocidas/inscriRegistro.htm]

The activities related to phytosanitary products focus on determining the risks of the products requesting marketing authorisation for the national market, since MSPSI reports on such risks are mandatory. In 2009 a total of 766 mandatory reports were issued, although the number is tending to fall, as European regulations come into effect. However, an increase is found in the number of reports issued in compliance with Royal Decree 2163/1994, which transposed Directive 91/414/EC, the aim of which was to harmonise the marketing of these products in the European market.

Of all the regulations published in 2009, special mention must be given to the new Regulation No. 1107/2009 of the European Parliament and of the Council of 21 October, on the placing of plant protection products on the market, which represents a real turning point in the harmonisation of these products in the EU, with worldwide repercussions.

In relation to the National Network for the Vigilance, Inspection and Control of Chemical Products, on 1 July 2009 it was established that the only means of notification of incidents is the Internet-based telematic system, which puts an end to the pilot phase of the System for the Rapid Exchange of Information about Chemical Products (SIRIPQ). In 2009 a total of 179 communications took place, in reference to 185 products (Figure 4.3).

Figure 4.3 **System for the Rapid Exchange of Information about Chemical Products (SIRIPQ), 2005-2009.**



	2005	2006	2007	2008	2009
Communications	207	275	352	363	179
Products	122	179	252	207	185

Source Sub-Directorate General of Environmental and Occupational Health. MSPSI.

In 2009, 534 cases of intoxication or accidents were recorded, through the Toxicovigilance System, as having been attended at the emergency services of 13 notifying hospitals.

Biotechnology

In 2009, Spain's National Biosafety Commission evaluated 92 dossiers of genetically modified organisms, of which 22 were for contained use facilities, 62 were for deliberate release, and eight were for marketing.

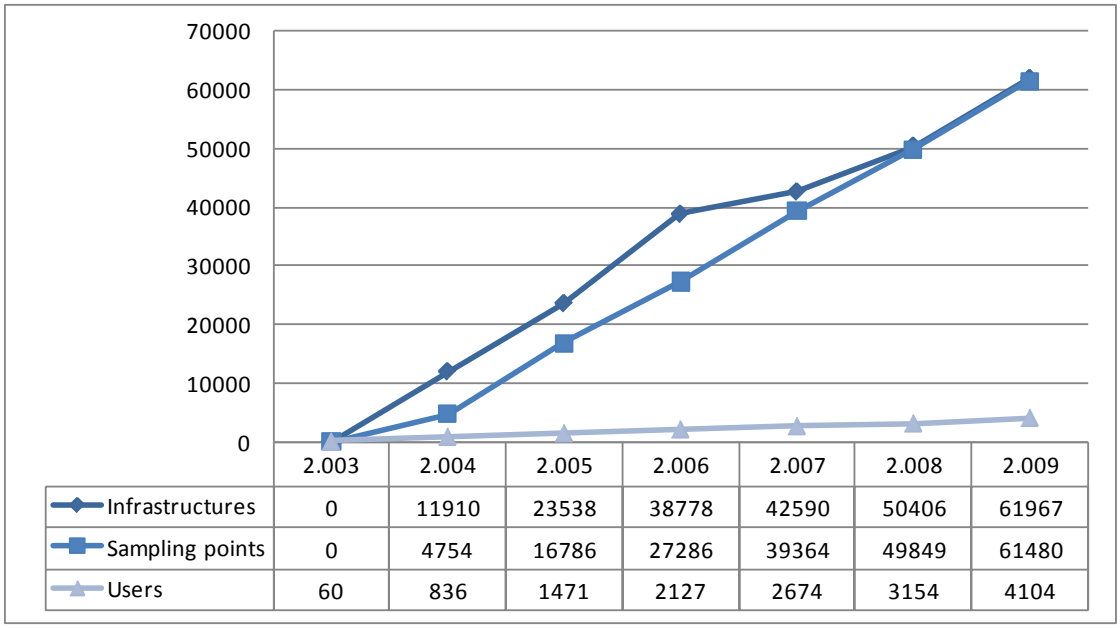
As for the Interministerial Council on genetically modified organisms, this body voted (using a written voting procedure) on 10 marketing notifications, 18 deliberate release notifications and 4 notifications of facilities for work with genetically modified organisms.

Water quality information systems

In relation to the National Information System on Drinking Water (SINAC),[33] progress in implementation since its launch has been constant and in some cases even exponential (Figure 4.4).

Over the course of 2009 a total of 46,595 visits took place through the *"access by citizens"* option, where the general public can find out about the quality of the drinking water in any location in Spain that has registered to participate in the system. There were 181,660 professional accesses to the system.

Figure 4.4 **Evolution of the implementation of SINAC, 2003-2009.**



	2.003	2.004	2.005	2.006	2.007	2.008	2.009
Infrastructures	0	11910	23538	38778	42590	50406	61967
Sampling points	0	4754	16786	27286	39364	49849	61480
Users	60	836	1471	2127	2674	3154	4104

Source Sub-Directorate General of Environmental and Occupational Health. MSPSI.

The Executive Drinking Water Information System (ALDAGUA) had 43 registered users at the end of 2009.

In relation to the National Information System on Water for Bathing (NAYADE),[34] in 2009 three co-ordination meetings were held and 161 telephone consultations and 48 written consultations were attended.

[33] Access to SINAC (Public Health). MSPSI. [http://www.msps.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/accesoSinac.htm]

[34] Access to NAYADE (National Information System on Water for Bathing). MSPSI. [http://nayade.msc.es/Splayas/home.html]

January 2009 saw the creation of the Geographical Information System on Water Quality (ATLANTIS), an Internet-based geographic information system about drinking water and water for bathing.

Also in 2009, a total of 212 laboratories received UNE-EN ISO 9001 certification and 104 laboratories were accredited by UNE EN ISO 17.025.

Physical environmental risks

In relation to the National Plan for the Prevention of the Effects of Excessive Temperatures on Health,[35] at no time in 2009 was the red alert (the highest level) activated, and the regional health services reported to the MSPSI a total of six deaths due to heat stroke during the summer.

The then Ministry of Health and Social Policy, in co-ordination with the Ministry of the Environment and Rural and Marine Affairs, and as part of the Government's policy in the area of health and climate change, created, through a resolution of the Council of Ministers, the Observatory of Health and Climate Change as an instrument to analyse, diagnose, evaluate and monitor the impact of climate change on public health and the SNS. One of its main objectives is to analyse changes in health arising from climate change in Spain, evaluating scenarios and models, assisting in decision-making, prioritising problems and proposing steps to address them.

Also, further work has been devoted to the development of the National Plan on Health and the Environment,[36] with the aim of increasing co-ordination and joint activities in the area of the environment and health, defining and quantifying the indicators that should be used to measure progress in this field.

4.4 Food safety and nutrition

One of the objectives of the Spanish Agency for Food Safety and Nutrition (AESAN),[37] attached to the MSPSI, is to raise social awareness about all aspects of food safety and nutrition.

To do so, the AESAN benefits from the participation of all the sectors represented in the various Agency bodies, those involved in both directing and in advisory and co-ordinating activities, where there is representation of other Ministries, the autonomous communities, industry, consumer associations and other groups, all of which inform the decisions it makes.

The 2009 working plan focused on strengthening AESAN actions within the general framework of objectives that has been developed in recent years, giving special priority to its co-ordination activities, basic legislation, relations with the European Union and scientific administration, which are essential elements for defending the health of Spanish citizens. The results of the audits performed by the European Union and the official control activities at the national level have helped determine the lines of strategy

[35] National Plan for the Prevention of the Effects of Excessive Temperatures on Health (2009). MSPS. [http://www.msps.es/ciudadanos/saludAmbLaboral/planAltasTemp/2009/docs/planExcesoTemperaturas2009.pdf]

[36] Base report for the creation of the National Plan on Health and the Environment (December 2007). [http://www.msc.es/ciudadanos/saludAmbLaboral/docs/informeBase.pdf]

[37] Access to AESAN. MSPSI. [http://www.aesan.msc.es/]

and programmes for future work, all aimed at improving the safety of the entire food chain. In the sphere of nutrition, the NAOS Strategy (Strategy for Nutrition, Physical Activity and Obesity Prevention)[38] has been the object of continued efforts, with the goal of reducing the prevalence of overweight.

The activities undertaken by AESAN have been within the framework of the Food Safety Strategy 2008-2012, which is structured into three main lines: to improve co-ordination between the Government and the European Union; to promote joint ministerial actions; and to reinforce co-ordination at the national level among all stakeholders in the area of food safety.

Risk analysis in food safety

The general objective of risk analysis as applied to decisions in food safety is to ensure the protection of human health. It applies to matters within the domain of the official control of foodstuffs and also to situations of food trade, and it must be: open, transparent, documented, and subject to evaluations according to the new scientific data that become available. Risk analysis must follow a structured method which covers three components: risk evaluation, risk management and risk communication. Precaution is an intrinsic element of risk analysis.

In the process of evaluating and managing food-related risks to human health, there are multiple sources of uncertainty. The degree of uncertainty and the variability of the scientific information available must be explicitly taken into account in risk analysis. The hypotheses used in the evaluation, and the options selected in terms of risk management, must reflect the degree of uncertainty and the characteristics of the danger.

The evaluation must consider the relevant production, storage and handling practices used all along the food chain, including traditional practices, and also the methods of analysis, sampling and inspection, and the incidence of specific harmful effects on human health.

Lastly, risk analysis must include clear, interactive and documented communication between the persons evaluating the risk and the persons in charge of risk management, and also two-way communication between all the stakeholders in the different aspects of the process. Furthermore, risk communication must go beyond the mere dissemination of information. Its principal function is to guarantee that all necessary information and opinions are taken into account in the decision-making process, to ensure effective management of the risks.

Co-ordination systems for information exchange in food alerts

In recent years, the growth of international trade and transoceanic travel has made it necessary to find global responses to potential situations of health emergencies in which foodstuffs are the main items involved.

The World Health Organization (WHO) proposed at its 57th session that a global network be created to guarantee food safety. This resulted in the founding of the

[38] Access to NAOS web site. MSPSI. [http://www.naos.aesan.msps.es/]

International Food Safety Authorities Network (INFOSAN). Its aim is to facilitate and promote the exchange of information regarding food safety and the actions of competent authorities on the international level. It goes far beyond the static concept of a database and calls for proactive networks of information exchange that cannot be limited to specific geographical areas.[39]

The Rapid Alert System for Food and Feed (RASFF) is an essential tool that allows quick reactions to incidents occurring in the sphere of food and feed. RASFF allows the European Commission, the food and feed authorities of the member states and organisations that form part of the RASFF to exchange information quickly and efficiently in the event that a health risk is detected.

The system is comprised of contact points in all the countries and organisations belonging to RASFF, and also in the European Commission, which exchange information about any health risk that may arise. There is a permanent service to guarantee the dispatch, reception and response to urgent notifications in the shortest time possible. When a member of RASFF has knowledge of a serious health risk derived from food or feed, it must immediately notify the European Commission through the RASFF system. The European Commission then informs the rest of the members without delay, so that appropriate actions may be taken. Such actions may include the withdrawal of a product from the market in order to protect the health of consumers.

In Spain, the RASFF is linked to the AESAN's Co-ordinated System of Rapid Information Exchange (SCIRI)[40] and to the Operational Intervention Plan on Animal Feed.

The SCIRI is a system, designed in the form of a network, that allows for constant vigilance against any risk or incident related to foodstuffs that may affect the health of consumers.

The system's primary objective is to guarantee to consumers that the products they find in the market are safe and pose no health risk. The basis for achieving this is the quick exchange of information among the different competent authorities, which enables appropriate actions to be taken by the authorities in relation to the foodstuffs that may have direct repercussions on the health of consumers.

The underlying legal framework of SCIRI is Regulation (EC) No. 178/2002, of 28 January 2002, laying down the general principles and requirements of food law, establishing the European Food Safety Authority (EFSA) and laying down procedures in food safety, and more specifically, in Article 50.

The Information System for Alert Management and Official Controls (ALCON) is a new computer application that provides support to the alert information system. It has electronic signature capacity and allows for electronic alert management with the autonomous communities.

The project came about in 2006, with the aim of designing an application accessed through a web interface, that incorporated information about the notifications made within the scope of SCIRI and official controls, both at the AESAN and the autonomous community level, and that would serve as a basic management tool for the official control of food safety. It brings together all existing computer developments and unifies platforms, languages and functional criteria at all levels, so as to maximise food safety for consumers, always in accordance with the multiannual official control programmes laid down in Regulation (CE) 882/2004.

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[39] INFOSAN Information note No. 2/2009 – "Human-animal interface aspects of Influenza A/H1N1 " (29 April 2009). [http://new.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=1382&Itemid]

[40] Food alert network (AESAN). MSPSI. [http://www.aesan.msc.es/AESAN/web/alertas/alertas.shtml]

In January of 2009 the SCIRI began to process dossiers concerning alerts, information and rejections using the ALCON application.

Notifications regarding foodstuffs are organised into four levels: alerts, information, rejections and various. The criteria used to classify a notification in one level or another are: characteristics of the risk associated with the food, origin of the food and its distribution.

"Alert" level is used for the notifications that, because of their characteristics, require immediate action or special vigilance by the competent authorities.

The "information" level is used for notifications whose characteristics do not, a priori, require immediate action or special vigilance by competent authorities but that serve as a source of complementary information for the planning of actions in the area of food safety.

The "rejections" level is used for the notifications that, due to their characteristics, do not require immediate action or special vigilance by the competent authorities.

The "various" level is used for those notifications whose characteristics do not correspond with alerts, information or rejections but that contains items of interest to the competent authorities. This level includes the notifications classified as "news" by the commission's services.

There is a two-fold purpose to the dissemination, through the SCIRI, of the measures adopted as a result of the controls effected when products from third countries enter EU territory: on the one hand it seals off EU territory from goods in which problems have been detected and which might pose a threat to the health of consumers, and on the other hand it provides necessary information to internal market authorities, making it possible to locate goods that may be in the same situation but have already been released for free circulation.

In general, the SCIRI notifications constitute, for the competent authorities, a permanent source of information that is useful for orienting and designing official control programmes and also for adopting certain measures, if necessary. In turn, the SCIRI plays the same role at the level of economic operators, as it facilitates the application of the internal control systems established by such operators.

Over the course of 2009, the SCIRI has processed a total of 3130 files related to foods, of which 186 were alerts, 1484 were information, 1413 were rejections of foods and 47 were classified as various. Table 4.6 shows the evolution in the number of notifications of food-related incidents that have been processed by SCIRI over the last five years.

Table 4.6 Evolution in SCIRI notifications, 2005-2009.

YEAR	2005	2006	2007	2008	2009
Alerts	217	197	293	209	186
Information	1,525	1,319	1,325	1,346	1,484
Rejections	1,390	1,225	1,210	1,353	1,413

Source Spanish Agency for Food Safety and Nutrition (AESAN). MSPSI.

As for the type of foods involved in alert notifications, in 2009 there were 91 notifications for products of animal origin, 80 for products of plant origin, 12 for incidents related to the materials in contact with food and three related to other foods.

Looking at the notifications classified as information in 2009, products of plant origin represented a total of 757 notifications, while on 583 occasions the products involved

were of animal origin, 109 involved materials in contact with food and 35 involved other foods.

With regard to rejection notifications in 2009, there was a total of 1413, of which the majority were for products of plant origin (907), followed by products of animal origin (426), materials in contact with foods (62) and other foods (18).

During the year 2009, in the alert notifications, the risks detected were mostly of a chemical type, followed by risks of a microbiological and physical type (Table 4.7).

Table 4.7 Classification of risks detected in SCIRI notification in 2009.

Type of risk	Notifications
Chemical risks	94
Biological risks	38
Physical risks	10
Other risks	44
TOTAL	**186**

Source: AESAN. MSPSI.

Food businesses

In 2008 the total number of businesses dedicated to the food sector in Spain was 594,740, according to the figures furnished by the autonomous communities. Of them, a total of 354,404 were visited for inspection purposes (Table 4.8). In 2007 there were 445,065 food businesses and 244,437 of them were inspected. There has thus been an increase in both the number of food businesses and the number of controls performed.

Table 4.8 Data concerning food businesses, 2008.

	Producers, processors and packers	Importers and exporters	Wholesalers and distributors	Retailers and service providers	Total
Number of food businesses	66,715	9,261	30,223	488,541	594,740
Number of food businesses visited	47,643	4,005	22,333	280,423	354,404
Number of visits for control purposes	291,843	6,459	110,267	590,543	999,112
Number of samples taken	75,986	238	1,683	16,014	93,921

Notes: Information provided by the autonomous communities

Source: AESAN. MSPSI.

The total number of visits taking place in 2008 was 999,112. The visits were mostly focused on retail businesses and service providers (with a total of 590,543 control visits) and secondly on producers, processors and packers (with 291,843 visits). The frequency of inspection is greater in businesses involved in the production and distribution phases of the food chain (an average of four visits to each business) than in retailers and imports and exports (an average of two visits to each business).

Zoonotic disease surveillance program

Royal Decree 1940/2004, of 27 September 2004, on the monitoring of zoonoses and zoonotic agents, incorporates Directive 2003/99/EC of the European Parliament and of the Council, of 17 November 2003, into Spain's national legislation. Its purpose is to ensure the epidemiological investigation of outbreaks of zoonotic diseases in humans, so as to gather the information needed to evaluate sources and relevant trends. The decree is applicable all over Spain and establishes mechanisms for the collection, analysis and dissemination of data regarding sources and trends in zoonoses and zoonotic agents at the national level.

The data concerning zoonotic diseases detected at slaughterhouses in 2008 are shown in Table 4.9.

Table 4.9 Data concerning zoonoses detected in slaughterhouses, 2008.

ANIMAL SPECIES	No. of animals sacrificed	Anatomopathological diagnosis	No. of animals affected by total or partial disposal	% of animals affected by total or partial disposal
BOVINE	2,126,483	Hydatidosis	10,686	0.5
		Cysticercosis	784	0.03
		Brucellosis	1,695	0.08
		Tuberculosis	8,471	0.4
		Other zoonoses	5,065	0.2
OVINE/CAPRINE	13,202,411	Hydatidosis < 1 year	6,712	0.05
		Hydatidosis > 1 year	442,631	3.3
		Cysticercosis	1,005,449	7.6
		Brucellosis	1,908	0.01
		Tuberculosis	1,086	0.008
		Other zoonoses	5,130	0.04
PORCINE	41,728,107	Hydatidosis	9,927	0.02
		Cysticercosis	17,238	0.04
		Brucellosis	2	0.000005
		Tuberculosis	1,851	0.004
		Trichinosis	75	0.0002
		Other zoonoses	598,033	1.4
EQUINE	25,867	Hydatidosis	0	0
		Cysticercosis	6	0.02
		Brucellosis	0	0
		Tuberculosis	0	0
		Trichinosis	0	0
		Other zoonoses	48	0.2
TOTAL	**57,082,868**		**2,116,797**	**3.7**

Notes Information provided by the autonomous communities

Source AESAN. MSPSI.

General Food Sanitation Register

The General Food Sanitation Register is the administrative instrument in which all the food-related industrial premises and businesses located in Spain must be registered, with the objective of protecting public health. It is a database and a census and regulatory tool used for programming inspections and processing food alerts, in compliance with Royal Decree 1712/1991, of 29 November 1991, on the General Food Sanitation Register. The Register is national and public. It is considered a unified register for all food-related inspections that are performed in Spain.

The following establishments must be registered at the General Food Sanitation Register: industrial premises and businesses related to food intended for human consumption; substances and materials that come into contact with such food; detergents, disinfectants and plaguicides used in the food industry; substances, including macromolecular material, for the manufacturing of packing and packaging materials that come into contact with food. Also required to register are dietetic or special food preparations, natural mineral waters and spring waters.

In order to register, industrial premises or businesses must first obtain a hygiene permit for operation, granted by the autonomous community in which the establishment is located.

Over the course of 2009, a total of 7387 entries were made regarding new industrial premises and 15,998 entries were made reflecting convalidations, 3610 reflecting change of ownership, 8280 change of registered address, 8165 expansions and changes in activity and 5715 premises closing down. There have also been 114 new products registered, of which 110 were dietetic foods and four were bottled drinking water. In addition, 107 entries were made in regard to modifications of dietetic foods that were already registered. Sixty-eight certifications of the data about registered industrial premises were prepared and added to the database of dietary supplements, along with 859 new notifications of products of this type being launched for the first time in the national market.

Spanish Strategy for Nutrition, Physical Activity and the Prevention of Obesity (NAOS)

The AESAN set in motion the Strategy for Nutrition, Physical Activity and the Prevention of Obesity (NAOS) in 1995, with the goal of raising the population's awareness about the problem that obesity poses for people's health and to promote initiatives that encourage citizens, especially children and young people, to adopt healthy lifestyles, primarily in terms of healthy eating and regular exercise. Since then, numerous actions have been performed, targeting families, schools, the business world and the health system.

In 2009, the third NAOS Convention (III Convención NAOS)[41] was held at the Ministry of Health, Social Policy and Equality. This third NAOS convention served to consolidate the event as a meeting point for professionals from sectors involved in the implementation of objectives set by the NAOS strategy, thus contributing to update and integrate all the actions and programmes designed to help reach such objectives.

The NAOS Strategy Awards also made its third call for submissions.[42] A total of 75 projects were presented to compete for the prizes. Their distribution in terms of target area was as follows: the school setting (38), families and communities (14), the health care system (10), the workplace (3) the business world (10). Two awards were given for each target area, one for projects that promote healthy eating and the other for projects that promote physical activity. Experience in past years led to the decision to no longer

[41] Conclusions of the Third NAOS Convention (AESAN). MSPSI. [http://www.aesan.msc.es/AESAN/web/notas_prensa/conclusiones_NAOS.shtml]

[42] List of winners of the Third NAOS Strategy Awards. MSPSI. [http://www.naos.aesan.msps.es/naos/estrategia/premios/ganadores/ganadores00103.html]

include applied research as a target area, due to the existence of other, more specific forms of recognition for projects of this type.

Action Plan to reduce salt consumption in the population

International institutions (WHO, FAO, EU) and also the governments of many countries are basing part of their interventions for the prevention of chronic diseases in primary prevention measures, such as the reduction of salt intake.

The AESAN began to consider, at the end of 2008, the idea of putting in place a plan to reduce the population's salt consumption, with specific objectives that would progressively allow the population to reach the WHO recommendation for a maximum daily salt intake of 5 g/person/day. This would contribute to reducing morbidity and mortality caused by high blood pressure and cardiovascular disease.

This initiative, which is along the same lines as others undertaken in various European countries with positive results (United Kingdom and Finland, for example), also falls within the policies promoted by the European Commission's Directorate General for Health and Consumers (DGSANCO), through its White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity,[43] and the recommendations of the High Level Group (working group comprising authorities of the member states and DGSANCO), which gives high priority to efforts to reduce salt intake in European countries, with flexibility and respect for the particularities of each member state.

To make a realistic proposal, the AESAN deemed that a necessary first step must be to understand the current situation, so as to be able to subsequently evaluate the project's impact. To this end, the following reports were drawn up:

- The relationship between excessive salt consumption and high blood pressure, cardiovascular disease, osteoporosis, kidney stones and gastric cancer.
- The estimation of the amount of salt and other nutrients consumed by the population and the foods with the highest content in such nutrients, based on a sample of individuals and research on dietary sources of salt and other nutrients. This study has determined that the average salt intake in Spain is 9.7 grams per person per day, which suggests that over 80% of the population consumes more salt than is recommended.
- The study involved the analysis of samples and market studies of different food groups, types and brands that are among the most consumed by the population and the measurement of their content in salt and other nutrients through laboratory testing. This study, in which over 1200 food samples were studied, determined that the food groups that add the most salt to the diet of Spaniards are: sausages, bread and specialty breads, dairy products and prepared foods.

In 2009, three priority areas were selected for work with the autonomous communities, based on actions proposed in the European Commission's White Paper on a Strategy for Europe on Nutrition, Overweight and Obesity or in the WHO European Action Plan for Nutrition and Health Policy.[44] They were: to review the nutritional

[43] White Paper "A Strategy for Europe on Nutrition, Overweight and Obesity" [http://ec.europa.eu/health/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf]

conditions of school dining halls; to promote physical activity; and to design indicators to measure the population's eating and exercise habits.

Among these groups, the most advanced is the one working on nutritional conditions in school dining halls, which is formed by representatives of the Regional Ministries of Health and of Education, representatives of the Ministry of Education and members of the AESAN. A consensus document has been prepared on the subject of food at schools, to be applied all over the country, that lays down the food safety conditions that must be met by school dining halls, the nutritional values the menus must have depending on the age group, the qualifications required of the staff in charge of supervising school menus, the information that must be provided about school menus to the children's families, and the organisational steps and safety measures that must be observed when preparing menus for students with special needs. The consensus document also lays down the nutritional criteria required of the foods available in vending machines and in cafés located on school premises.

Code for self-regulation in food advertising

In addition, the Code for Self-regulation in Food Advertising Targeting Children (the PAOS code),[45] developed by the Spanish Federation of Food and Beverage Industries (FIAB), lays down a series of rules to guide companies in the development, execution and dissemination of advertising messages aimed especially at children under the age of 12. The purpose is to avoid excessive advertising pressure on children and to help promote healthy eating and exercise habits in children and youth.

The Association for Self-regulation in Advertising (AUTOCONTROL) has the task of enforcing compliance with these rules. The companies that adhere to the PAOS code, which currently represent 96% of those that advertise to children under the age of 12, voluntarily present their advertising proposals to AUTOCONTROL for review before they disseminate them.

PAOS code application follow-up takes place through mechanisms for the out-of-court resolution of controversies (advertising jury) and also through the monitoring commission, comprised of an AESAN representative acting as chair, three representatives of the Council of Consumer Associations, three FIAB representatives and one representative of AUTOCONTROL, who acts as secretary and has the right to participate in deliberations but not to vote. One of the functions of the monitoring commission is to periodically evaluate the application of the PAOS code, analysing compliance reports presented by AUTOCONTROL.

In this field, the then Ministry of Health and Social Policy took a further step to protect children from excessive advertising, with an agreement signed in September 2009 with the TV channels belonging to the Federation of Regional Radio and Television Stations (FORTA) and the Union of Associated Commercial Television Stations (UTECA).

[44] European Parliament Resolution, of 25 September 2008, on the White Paper "A strategy for Europe on Nutrition, overweight and obesity." [http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2008-0461+0+DOC+XML+V0//EN]

[45] The PAOS code. MSC. [http://www.msps.es/novedades/docs/CodigoPAOS.pdf]

School-based programme for health and exercise against obesity

The school-based programme for health and exercise against obesity (PERSEO)[46] is a pilot programme designed to promote healthy eating and exercise at schools. It forms part of the NAOS strategy and its aim is to improve the health of school-aged children by changing their eating habits and reducing sedentariness. The programme's participants are 14,000 children aged between six and ten, from 67 schools in six autonomous communities (Andalucía, Canarias, Castilla y León, Extremadura, Galicia and Murcia) and in Ceuta and Melilla; 640 educators, 500 health professionals from 67 primary care centres and 300 pharmacies, which have distributed information.

The first stage of the PERSEO programme was to gather information from participants so as to make a diagnosis of the situation. Then the actions were undertaken and finally the results were measured. To be able to see the effectiveness of the actions, the schools were divided into 34 intervention schools and 33 control schools.

To work with precise data, the schoolchildren were measured and weighed and their body mass index (BMI) was calculated at the beginning and at the end of the programme, so that an idea of the results of PERSEO could be obtained.

After the first measurement, parents received, confidentially, the data about their children. In 5.01% of the cases health problems were detected, and parents were advised to visit a medical doctor for evaluation.

The prevalence of obesity in children participating in the PERSEO programme was 19.8% in boys and 15% in girls. In other words, almost two out of every 10 boys analysed were obese and three out of every 20 girls. It should be noted that the areas selected for the PERSEO programme were chosen precisely because of their high rates of obesity. Insufficient vegetables, fish, legumes, eggs, yoghurt and fruit, along with too much meat and precooked, fried foods, among other dietary imbalances detected by PERSEO, indicate that it is necessary to find ways to encourage boys and girls to follow the traditional Mediterranean diet.

As for sedentariness, PERSEO has detected that 13% of the boys and girls never play sports or engage in sport activity, and almost 10% of the boys and girls engage in sports activities for only one hour a week. Experts suggest that these age groups should engage in physical activity at least one hour a day.

The interventions undertaken include actions in the school dining halls, menu assessment and recommendations for more balanced menus (more fruits and vegetables and fewer fried foods). To reinforce this action a PERSEO guide for school dining halls was distributed.

With regard to extracurricular activities, the brochures *Guide to healthy physical activity, Student handbook* and the *Guide to an active, healthy school* were distributed. The purpose of these documents is to make both schoolchildren and their families more aware of the importance of children getting enough physical exercise.

The programme also includes didactic material and training material (developed specifically for this purpose or already developed by the former Ministry of Education, Social Policy and Sports and former Ministry of Health and Consumer Affairs), a web page and an awareness campaign. Over 100,000 documents were published, including questionnaires, brochures, leaflets, posters, guides, text books and manuals for teachers,

[46] Web access to the PERSEO programme. MSPSI and the Ministry of Education. [http://www.perseo.aesan.msps.es/es/programa/secciones/programa_perseo.shtml]

and the letters to the parents of the 14,000 school children participating in the programme.

During the 2008/2009 academic year, once the educational intervention had concluded, the students' anthropometric measurements were taken again and 11 surveys, consisting of over 2000 questions, were conducted on an estimated population of more than 13,000 students.

The autonomous communities have also made considerable efforts to implement plans and programmes related to the promotion of healthy eating and exercise in the general population, and more specifically in children and teenagers, as detailed in Table 4.10.

Table 4.10 Actions by autonomous communities to implement plans and programmes related to sedentariness, 2009.

	ACTIONS UNDERTAKEN
Andalucía	- Continuation of the "Plan to promote exercise and healthy eating 2004-2008." Review of the second edition. - Project RELAS: in accordance with the Health in All Policies philosophy, a pilot was undertaken in 10 municipalities, through agreements for the implementation of the local health action network, to facilitate the development of local health plans. The pilot has ended and now a strategy is being designed for the development of local health action in other municipalities. http://www.juntadeandalucia.es/salud/pafae
Cantabria	- Programme on healthy eating and exercise in children and teenagers in Cantabria.
Castilla y León	- Collaboration agreements signed with local and provincial governments to carry out health promotion activities focused on physical activity. - Funding of health promotion projects to be carried out in schools. http://www.salud.jcyl.es/sanidad/cm/ciudadanos/tkContent?idContent=18505&locale=es_ES&textOnly=false
Castilla-La Mancha	- Subsidies for health promotion projects focused on promoting physical activity, 2009. Resolution 18/08/2009DOCM of 3 June 2009. (http://docm.jccm.es/portaldocm/descargarArchivo.do?ruta=2009/06/03/pdf/2009_7825.pdf&tipo=rutaDocm)
Cataluña	- Continuation of "Comprehensive Plan to promote health through physical activity and healthy eating (PAAS)" and the "Plan on physical activity, sports and health," which were begun in 2005. http://www.gencat.cat/salut/depsalut/html/ca/dir2649/doc33796.html
Comunidad Valenciana	- Evaluation of the "Regional Health Plan 2005-2009" and more specifically of Objective 5 regarding "Winning in health: sports activity" http://www.san.gva.es/cas/comun/plansalud/pdf/iiplandesaludcvalenciana.pdf - Continuation of activities to promote physical exercise within the "Plan for Cardiovascular Disease Prevention" begun in 2006. Activities include an agreement with the region's Council of Nurses (CECOVA) for health promotion activities, including those related to physical exercise; agreements with professional associations of pharmacists, including the publication of materials for the public and guides to preventing cardiovascular disease (including a specific one on physical exercise), disseminating the recommendations in terms of physical exercise made by the programme to oversee children's health, media actions to promote physical exercise and the dissemination of material on this subject to the public. http://publicaciones.san.gva.es/publicaciones/documentos/V.1420-2006.pdf
Extremadura	- Community programme "Exercise takes care of you" with specific subprogrammes: the elderly population, children, youth, the disabled. This programme began in 2007. - Continuation of the activities of the "Regional Network for Healthy and Sustainable Cities (RECSyS)" which began in 2003. Priority was given to initiatives to promote healthy eating and physical activity. http://www.recsssh.es
Galicia	- Project for healthy municipalities. www.concellossaudables.com
Source	Information provided by the autonomous communities and INGESA for this report.

5 Medicinal and health products

A **medicinal product** is defined as any substance or combination of substances presented as having properties for treating or preventing disease in human beings or animals, or which may be used with a view to restoring, correcting or modifying physiological functions by exerting a pharmacological, immunological or metabolic action, or with a view to making a medical diagnosis.

Medicinal products are regulated throughout their entire lifecycle. They must have marketing authorisation issued by the Spanish Agency of Medicines and Health Products (AEMPS) following evaluation of their quality, safety and efficacy, and any variation that is developed must also be authorised by or notified to the AEMPS. These evaluations ensure that the pharmaceutical maintains a positive benefit/risk ratio during its entire time on the market.

The pharmaceuticals regulated by the AEMPS include products as far-ranging as medicines of chemical or biotechnological origin, haemoderivatives, vaccines, plant-based medicines, homeopathic medicines, contrast media for radiological examinations or cell therapies.

Information regarding AEMPS-authorised pharmaceuticals can be consulted at the Online Pharmaceutical Information Centre of the AEMPS web site[1], which is updated on a regular basis.

The definition of **health product**, to put it in simple terms, is any product used in health care but that is not a pharmaceutical. They can be of many different types and have very different purposes: from devices used to correct deficiencies (such as eyeglasses, hearing aids, etc), to diagnostic equipment, active implantable products (such as pacemakers) or non-active implantable products (such as heart valves), diagnostic reagents or computer programmes used in health care.

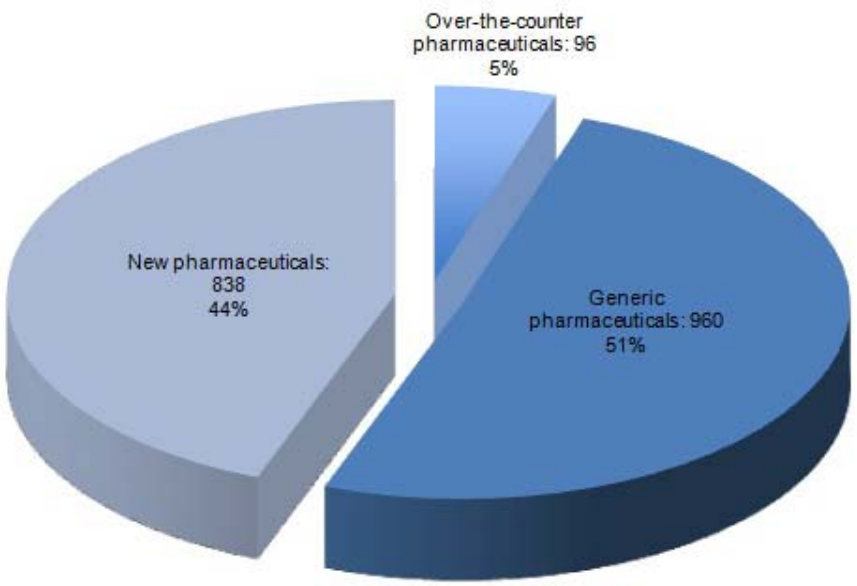
5.1 Evaluation and authorisation of pharmaceuticals and health products

No **medicinal product** can be marketed in Spain without previous authorisation by the AEMPS or the European Commission. To obtain authorisation to market a medicinal product, the applicant must submit all the results of the research conducted on the pharmaceutical, information related to its manufacture, a risk management plan and, in general, all the documentation that demonstrates compliance with authorisation requirements (Figure 5.1).

During the evaluation process, the AEMPS analyses the information derived from both the pre-clinical phase and the clinical trials, data regarding its manufacture and all the chemical and pharmacological controls. The pharmaceutical, its raw materials or its intermediate products may be submitted to analysis in the agency's official control laboratories or there may be an inspection of the facilities in which it is manufactured.

[1] Web site of the Spanish Agency of Medicines and Health Products. [http://www.aemps.es/]

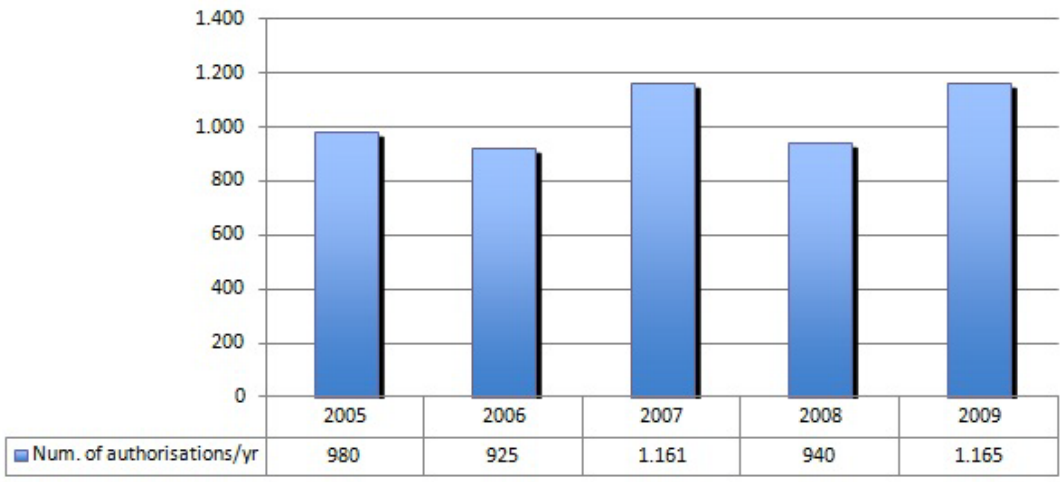
Figure 5.1 **Distribution of applications for pharmaceutical authorisation evaluated in 2009.**



Source Annual report AEMPS 2009.

Whether marketing authorisation is granted depends on scientific criteria regarding the quality, safety and efficacy of the pharmaceutical under consideration. Evaluation of these three criteria enables an assessment to be made of the pharmaceutical's benefit/risk ratio for the diseases and situations for which it is approved (Figure 5.2 and Table 5.1).

Figure 5.2 **New pharmaceutical authorisations. Evolution 2005-2009.**



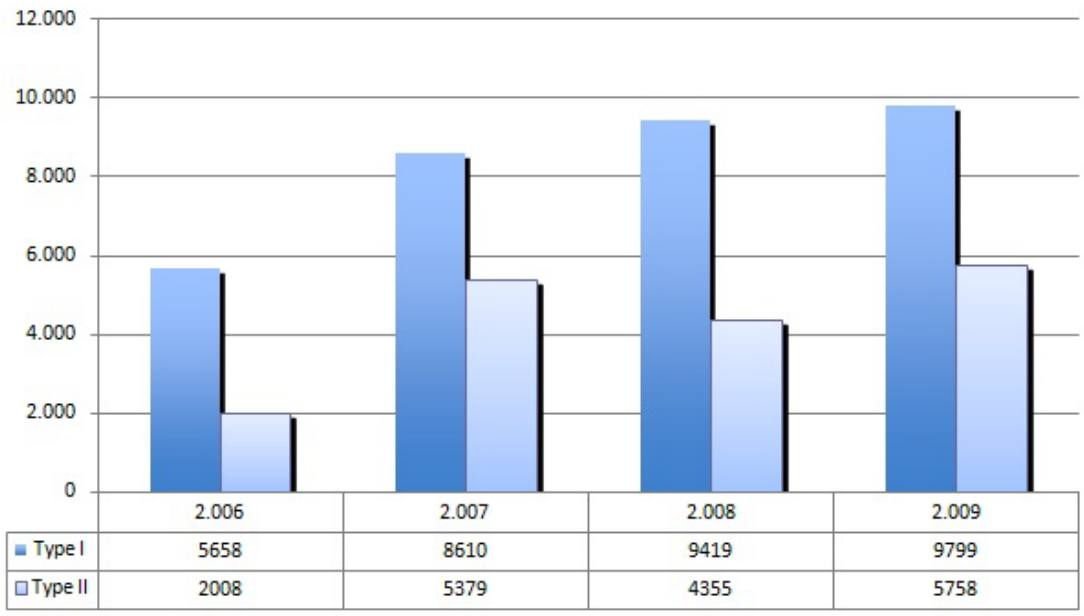
Source Annual report AEMPS 2009.

When the evaluation of a pharmaceutical has a favourable outcome, a marketing authorisation is issued, specifying the conditions established by the AEMPS regarding appropriate use (dosage, precautions, contraindications, etc.). These conditions are

included in the information about the pharmaceutical's use. The information aimed at health professionals is available on the technical data sheet while the information for patients is found in the product insert.

After its authorisation, the medicine is subject to constant monitoring in the area of risks and new uses, and authorisation can thus be re-examined at any time. Any change that is to be made in an authorised medicine must be submitted for evaluation using the same procedure as in the original authorisation (Figure 5.3).

Figure 5.3 **Authorisations of variations of pharmaceuticals. Evolution 2005-2009.**



Source Annual report AEMPS 2009.

Table 5.1 **Authorisations of pharmaceuticals by therapeutic group. 2009.**

THERAPEUTIC GROUPS	Number	%
Central nervous system	359	30
Cardiovascular system	217	18
Antineoplastic agents	130	11
Digestive system and metabolism	127	11
Blood and blood-forming organs	82	7
Anti-infective agents, general route	76	6
Respiratory system	56	5
Locomotive system	54	5
Genito-urinary preparations and sex hormones	39	3
Various	23	2
Dermatological agents	8	0.7
Sensory organs	8	0.7
Systemic hormonal preparations, excluding sex hormones	6	0.5

Source Annual Report AEMPS 2009.[2]

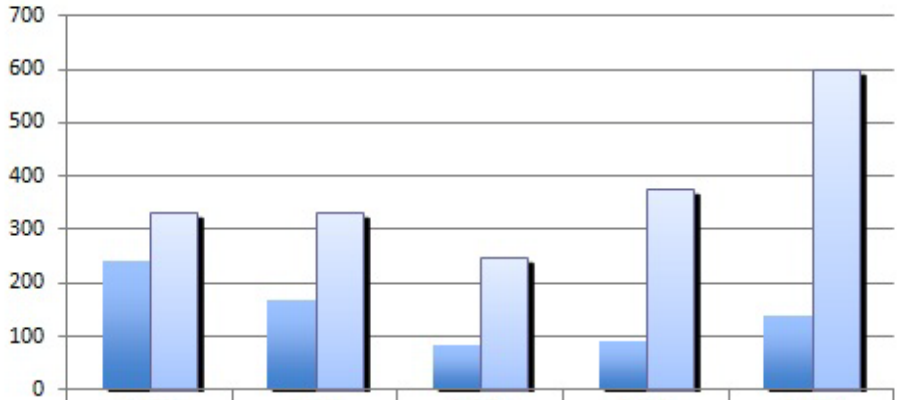
Health products are regulated by harmonised health regulations in the European Union. Manufacturers, whether from Europe or elsewhere, who wish to market a health product

[2] See footnote 1.

in Europe must present to an evaluation body all the required documentation concerning the design, manufacture and sterilisation process, functional tests, clinical trials, packaging materials, compliance with technical norms and the information accompanying the product. The AEMPS, as Notified Body number 0318, designated by the Ministry of Health, Social Policy and Equality, analyses this documentation in addition to inspecting the facilities where the product is manufactured. If the results of the evaluation are favourable, it issues a certificate of conformity which allows the number of the notified body and the Conformité Europeene (CE) mark to be placed on the product, indicating that it complies with regulatory requirements. With such a mark it can be marketed all over the European Union with no need for new evaluations.

The other AEMPS activities in the area of health products are the authorisations of clinical research, authorisations and inspections of facilities where products are manufactured, imported or sterilised, the controls exercised by pharmaceutical inspectors at the border and the co-ordination of the regional inspection services for purposes of market surveillance.

Figure 5.4 **Authorised health product companies. Evolution 2005-2009.**



	2.005	2.006	2.007	2.008	2.009
New authorisations	241	168	83	91	138
Modifications/removals	334	331	250	378	602

Source Annual report AEMPS 2009.

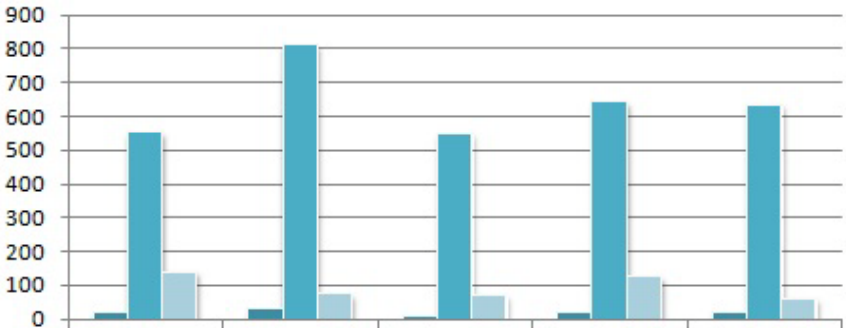
Figure 5.4 shows the new authorisations of health product companies and authorised modifications in these companies. The year 2009 saw an increase in authorisations as compared to the two preceding years, although there continued to be a high number of rejections resulting from the company not meeting the legal requirements. The most significant development, however, was the large increase in the number of modifications in authorised companies.

This gives an idea of the composition of the Spanish market in terms of moderate and high risk health products (active implants, health products of class IIB and class III, *in vitro* products of Annex II and *in vitro* diagnostic devices for self testing),[3] as well as the revision activity that AEMPS carries out to check compliance by products of this

[3] Health products are classified as I, IIa, IIb and III, depending on their risk profile. To correctly classify the products it is necessary to apply the rules established in Annex IX of Royal Decree 1591/2009. Regarding in vitro diagnostic products, Annex II of Royal Decree 1662/2000 contains the complete list of reagents.

type that are put on the market or in service in Spain. With the enactment, on 21 March 2010, of Royal Decree 616/2009, of 26 October 2009, on active implantable devices and of Royal Decree 1591/2009, of 16 October 2009, on health products, the register is extended to cover the products of class IIA.

Figure 5.5 Communications of the market launch of new moderate and high risk health products. Evolution 2005-2009.



	2.005	2.006	2.007	2.008	2.009
Active implants	20	31	9	20	21
Class IIb and III	552	811	549	643	635
In vitro diagnostic products	140	73	70	125	61

Source Annual report AEMPS 2009.

To facilitate these procedures, a computer application was developed that allows the communications to take place electronically, via a web page.

Table 5.2 CE certification of health products, 2005 - 2009.

NB No. 0318	2005	2006	2007	2008	2009
Products certified	755	168	148	552 (plus 1786 variations)	364 (plus 1510 variations)
Products with renewed CE certificates	267	244	412	866 (plus 1227 variations)	386 (plus 689 variations)
Batch verifications	230	322	279	398	502
Quality audits performed	103	74	77	111	61

Notes CE: Conformité Europeene (European Conformity)
Source Annual report AEMPS 2009.

The increase in the number of products certified in 2005 was due to the application of new criteria about the meaning of 'new product', as opposed to a minor modification in the design (variant), so it does not actually represent an increase in the certification activities. However, 2008 and 2009 did see a very substantial increase in the number of certificates issued, due to re-evaluations of joint prostheses. Such re-evaluations were undertaken because these products were reclassified, and are now included in class III.

Starting in 2008 the number of marketing variations is indicated along with the number of products certified and renewed, since this information gives an idea of the quantity of shapes, sizes and small design variations that are evaluated as part of product certification activity.

Finally, in 2009 there was also an increase in the verifications of batches of "*in vitro*" diagnostic products (Table 5.2).

As for the type of products certified by the Notified Body by categories, the highest number corresponds to non-active implantable products, followed by single-use health products and by ophthalmologic and optical products.

5.2 Monitoring medicinal and health products already on the market

While the product is on the market, the AEMPS continues to guarantee the quality, safety, efficacy and availability of correct information through pharmacovigilance systems, inspections, quality control and the fight against illegal and counterfeit pharmaceuticals. Citizens and health professionals are continually informed about these issues.

Safety monitoring

Pharmaceuticals for human use

All pharmaceuticals can cause adverse reactions. The aim of the AEMPS is to learn about them as early as possible, before and after their marketing begins, so as to be able to correctly evaluate the benefit/risk ratio at all times.

Pharmacovigilance enables informative activities to be carried out, technical data sheets and product leaflets to be updated, and exceptionally, pharmaceuticals to be withdrawn from the market.

The Spanish System of Human Pharmacovigilance (SEFV-H) is comprised of the 17 regional monitoring centres and the AEMPS. In turn, the AEMPS shares the information regarding serious adverse reactions with the European Medicines Agency (EMA) and the other national medicines agencies in the European Union. There is thus a complete vigilance network that allows for fluid communication and facilitates the detection of infrequent cases.

The sources of the information handled by these agencies concerning adverse reactions are the notifications of cases by health professionals such as doctors, pharmacists or nurses, to SEFV-H, using the yellow card; and what is published or notified by researchers who study pharmaceuticals at hospitals, universities, laboratories, or within the pharmaceutical industry itself. Authorities from other countries or international health organisations also send communications.

The appearance of several similar cases leads to studies being undertaken to attempt to discover the causal relationship between exposure to the pharmaceutical and the adverse reaction.

Also, even after authorisation of a pharmaceutical, studies continue to be performed, to learn more about its safety in conditions of real use in medical practice, or to broaden its uses in populations not yet studied, such as children or patients in more serious condition.

These studies help new, infrequent adverse reactions to be identified and also help discover possible new indications. Some pharmaceuticals are authorised with a risk

management plan, under the condition of performing studies focused on specific problems that have been detected during the authorisation process.

The growth in the figures of suspected cases of adverse reactions in 2009 (fifty percent more than in 2008) is a reflection of the effort being made in the tasks of evaluation, codification and uploading to FEDRA, the SEFV-H database on adverse reactions, of reported cases of suspected adverse reactions. Of these figures, the proportion notified by the pharmaceutical industry (20%) was similar to the preceding year, with 2314 cases out of a total of 10,030 in 2008 and almost 3000 cases out of a total of 15,000 cases in 2009. These figures sometimes include various follow-up messages related to each case during the time following initial notification. The decline in the number of notifications in 2007 was due to the updating of FEDRA, which that year was adapted to adhere to international standards necessary to allow for the electronic exchange of information between different databases, in different countries, concerning the suspicions of adverse reactions. (Table 5.3).

The pharmaceutical industry has sent its notifications of suspected cases electronically since 10 June 2008.

Table 5.3 Notifications of adverse reactions to drugs for human use, 2006 - 2009.

Provenance		2006	2007	2008	2009
Spanish Pharmacovigilance System		10,034	8,875	10,030	15,099
Pharmaceutical industry	Companies in Spain	2,595	1,831	2,314	2,955
	Companies in other countries	98,368	112,560	*	*

Notes *These are sent directly to Eudravigilance.

Source Annual Report AEMPS 2009[4]

Starting on 8 August 2007, after the modifications had been made to the FEDRA database, cases detected in Spain have been sent electronically to the European database *EudraVigilance-Postauthorisation Module* (EV-PM) of the EMA. This change meant that all the *"severe"* cases were sent to the EMA, regardless of how the suspected medicine had been registered. Up to that time only cases involving pharmaceuticals that had been registered through the centralised system were sent, which explains why figures in 2008 and 2009 are higher than in 2007.

Over the course of 2008 and 2009, the dispatch of FEDRA notifications to the WHO Collaborating Centre in Uppsala, Sweden (the Uppsala Monitoring Centre) was regularised (Table 5.4). In 2009, dispatch started to be sent electronically every two months. As for notifications concerning "severe" adverse drug reactions (ADR) received directly by the regional branches of SEFV-H, uploaded to FEDRA and forwarded to laboratories holding marketing authorisation, the figures for 2009 are very similar to those of 2008, although there is a growing number of authorised laboratories with computer systems enabling them to receive such information in electronic dispatches sent by the AEMPS.

In 2009 the post-authorisation studies classified by the Division of Pharmacoepidemiology and Pharmacovigilance of the AEMPS (Table 5.6) began to be quantified.

[4] See footnote 1

Table 5.4 **Notification of adverse reactions to pharmaceuticals sent to international bodies and the pharmaceutical industry, 2007-2009.**

Sent to international bodies	2007	2008	2009
EMA expedited reporting (within 15 days)	2,372	5,366	7,297
WHO (International pharmacovigilance programme)	3,946	7,000	14,315
Sent to the pharmaceutical industry	**2007**	**2008**	**2009**
Expedited reporting (within 15 days)	1,711	3,060	2,966

Notes	EMA: European Medicines Agency
Source	Annual Report AEMPS 2009.[5]

Table 5.5 **Periodic safety updates, 2006-2009.**

	2006	2007	2008	2009
On registered pharmaceuticals	1,800	2,250	3,800	2,500
Exemptions processed (generics)	292	380	397	394
Source	Annual Report AEMPS 2009.[6]			

As for the number of protocols received (in addition to the ones quantified in the aforementioned classification), in 2009 there was a 20% increase over 2008. This variation may be due, in the first place, to an increase in the number of post-authorisation studies taking place in Spain and secondly, to the actions undertaken by the AEMPS and the autonomous communities to make the applicable law better known, and, finally, to the efforts made to renew the existing legislation, which gave rise to the Ministerial Order SAS/3470/2009, of 16 December 2009.

Table 5.6 **Post-authorisation studies, 2006 - 2009.**

	2006	2007	2008	2009
Studies for classification purposes	----	----	----	158
Protocols received	90	104	109	129
Monitoring reports	25	24	54	37
Final reports	30	28	41	14
Source	Annual Report AEMPS 2009.[7]			

In 2009, the number of applications regarding safety modifications was similar to that of the preceding year, although with a higher number of mutual recognition procedures.[8] There was an overall 10% increase in the applications evaluated and processed as compared to 2008, particularly in applications involving mutual recognition (Table 5.7).

[5] See footnote 1
[6] See footnote 1
[7] See footnote 1
[8] Mutual recognition procedure: a marketing authorisation procedure used when a pharmaceutical has already been authorised by an EU Member State. The authorised party can submit an application seeking recognition for the same pharmaceutical in other Member States.

Table 5.7 Pharmaceutical safety modifications, 2007 - 2009.

Applications	2007	2008	2009
National (Spain)	829	388	403
Mutual recognition	543	718	744
Total	1,372	1,106	1,147
Evaluated and processed	**2007**	**2008**	**2009**
National (Spain)	928	603	498
Mutual recognition	884	534	770
Urgent safety restrictions	2	----	----
Total	1,712	1,137	1,287

Source: Annual Report AEMPS 2009.[9]

BIFAP: Database for Pharmacoepidemiological Research in Primary Care

The purpose of the Database for Pharmacoepidemiological Research in Primary Care (BIFAP), which was created and maintained in collaboration with the autonomous communities, is to make available anonymous clinical information concerning patients attended in primary care centres (general medicine and paediatrics). This large database allows the AEMPS, pharmacovigilance bodies and SNS researchers to perform pharmacoepidemiological studies more efficiently than with traditional methods (field studies) (Table 5.8).

Over time, the number of doctors who collaborate with BIFAP has increased progressively.

Table 5.8 Activity in the BIFAP database, 2007-2009.

BIFAP activities	2007	2008	2009
Collaborating doctors	1,001	1,236	1,910
Patients whose information has been incorporated	2,208,652	2,390,376	3,180,161
Records concerning health problems	16,029,405	33,046,590	37,513,688
Records concerning medication	59,540,878	126,091,704	179,377,410

Notes: BIFAP: Database for Pharmacoepidemiological Research in Primary Care

Source: Annual Report AEMPS 2009.[10]

Health products: the Health Product Vigilance System

Health products, once they are on the market, are overseen by the health product vigilance system, which operates at the international level. In addition to the European Union, the United States, Canada, Australia and Japan also participate in this endeavour. In Spain there is a rapid alert network comprised of the AEMPS and the regional monitoring points. Through this system information, recommendations and measures to be adopted are sent to professionals and health care centres. The vigilance system allows adverse incidents to be predicted, which is followed by the actions necessary to block the sale of products or withdraw them from the market if they are believed to be a source of risk.

[9] See footnote 1
[10] See footnote 1

The reporting of incidents within the framework of the health product vigilance system (Sistema de Vigilancia de Productos Sanitarios)[11] has increased over the past two years, with over 300 notifications more in 2009 than in the preceding year (**Table 5.9**).

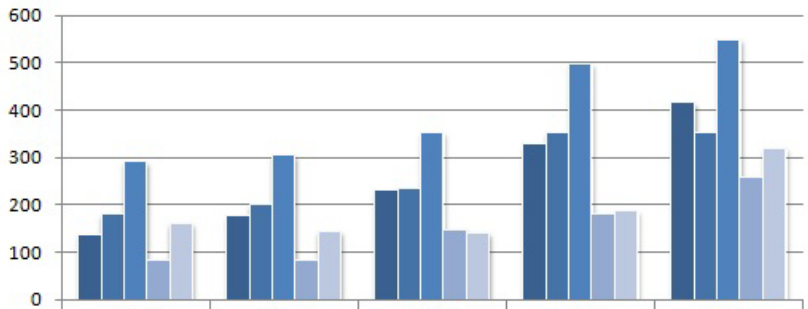
Table 5.9 **Health product vigilance system. 2005-2009.**

	2005	2006	2007	2008	2009
Notifications received	852	907	1,109	1,546	1,894
--Adverse incidents received	----	----	----	----	934
--Corrective actions for safety received	----	----	----	----	923
--Other notifications received	----	----	----	----	37
Actions undertaken	2,172	2,135	2,530	4,992	5,541
--Administrative resolutions	----	----	----	----	----
--Safety notes	2	6	12	2	6
--Alerts transmitted to regional monitoring points	----	----	----	335	420

Source: Spanish Agency of Medicines and Health Products. MSPSI.

The group of products with the greatest increase was *in vitro* diagnostic products, followed by the active implants group. Actions taken in relation to these notifications and the alerts transmitted to the autonomous communities also increased (Figure 5.6).

Figure 5.6 **Adverse incidents notified to the health product vigilance system, 2005-2009.**



	2.005	2.006	2.007	2.008	2.009
Active implants	138	176	231	328	415
Non-active implants	179	200	236	352	352
Non-implantable devices	291	305	353	498	549
Electromedical/mechanical devices	83	82	148	181	259
In vitro diagnostic products	161	144	141	187	319

Source: AEMPS. MSPSI.

[11] Web site of the Spanish Agency of Medicines and Health Products. [http://www.aemps.es/]

Inspection

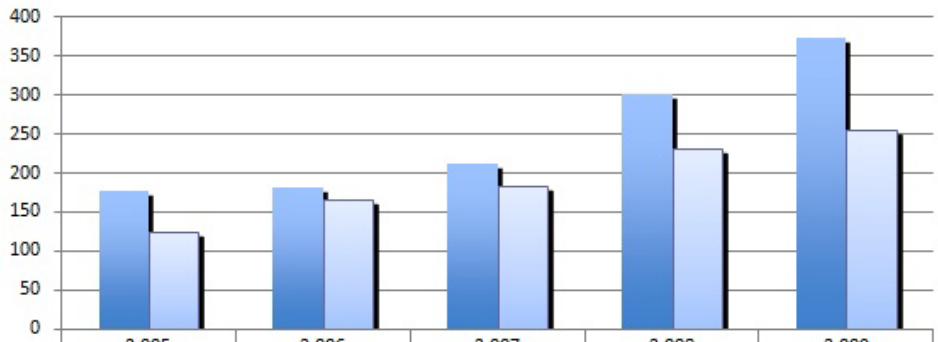
Pharmaceuticals for human use

Pharmaceuticals are subject to strict quality assurance measures from the moment their manufacture begins until they are dispensed. To ensure that such measures are applied, the AEMPS conducts inspections of manufacturers and campaigns to check products in dispensing pharmacies. In addition, the AEMPS intervenes immediately whenever any quality problem is detected, and orders the withdrawal of the medicine from the market whenever a health risk exists. The aim of these exhaustive control measures is to protect the health of citizens.

Good Manufacturing Practices inspections

Good Manufacturing Practices (GMP) are the part of quality assurance that ensures that pharmaceuticals are manufactured and monitored as stipulated by the quality requirements appropriate to the use for which they are intended (Figure 5.7).

Figure 5.7 **Good Manufacturing Practices (GMP) Inspections, 2005 - 2009.**



	2.005	2.006	2.007	2.008	2.009
Inspection requests	177	182	211	301	374
Inspections performed	124	165	183	231	255

Source Annual report AEMPS 2009.

In relation to preceding years, 2009 continued to show an increase in inspections at the international level. Thirty international inspections were performed, 28 of them concerning centralised registration procedures, compared to the 23 that took place in 2008. As for inspections of manufacturers of active ingredients, continued annual increase has been observed; in 2009 there were 12 inspections compared to the 10 of 2008. Also of interest is the increase of this type of inspection in the sphere of advanced therapies; there were 6 inspections in 2009, compared to 3 in 2008.

Inspections to ensure Good Clinical Practice and Good Pharmacovigilance Practice

These inspections verify whether clinical trials are being conducted in accordance with current legislation and following Good Clinical Practice (GCP). This ensures the safety and well-being of the patients participating in these trials and also the reliability of the results. The investigations also check that responsibilities and duties are managed as stipulated by applicable pharmacovigilance legislation (Table 5.10).

Table 5.10 **Inspections of Good Clinical Practice (GCP) and Good Pharmacovigilance Practice (GPvP), 2005-2009.**

Inspections GCP and GPvP	2005	2006	2007	2008	2009
Inspections performed	6	3	9	19	21

Source: Annual Report AEMPS 2009.[12]

In 2009 the level of inspection activity remained stable both nationally and internationally. It is interesting to note that this year the AEMPS was the European agency that performed the highest number of international inspections.

Post-market control

Pharmaceuticals for human use

Every year the AEMPS, in collaboration with the autonomous communities, carries out a post-market control programme to monitor the quality of the authorised pharmaceuticals in the chain of distribution. The inclusion of pharmaceuticals in the programme is based on their degree of risk. The Official Medicines Control Laboratories, which are part of the AEMPS itself, analyse the samples collected, in addition to performing the analytical tests required when quality problems are reported.

Table 5.11 **Control of the pharmaceutical market: actions in response to quality problems, 2005-2009.**

Market control actions	2005	2006	2007	2008	2009
Batches of pharmaceuticals withdrawn due to quality problems	44	51	32	35	38
Investigation of quality problems reported	172	83	116	177	191

Source: Annual Report AEMPS 2009.[13]

When a pharmaceutical for human use is withdrawn from the market the quality defect that motivated its withdrawal is classified according to degree of risk. In 2009, fourteen cases were classified as class 1 (highest risk), 23 were class 2 and only 1 case was class 3. The national health system was informed of all of them and they were published on the AEMPS web site (página electrónica de la Agencia[14]) (Table 5.11).

[12] See footnote 1
[13] See footnote 1
[14] See footnote 1

Another control activity that has a significant repercussion on the care provided is the implementation of measures aimed at guaranteeing the availability of pharmaceuticals. The AEMPS maintains, in collaboration with the autonomous communities, an information system for the rapid detection of shortages and tries to find the solution with the holders of marketing authorisation. Possible therapeutic alternatives are studied and made known. When necessary, exportation of the pharmaceuticals involved is blocked and, if required, their importation from other countries is authorised. All of this seeks to minimise the consequences that the absence of a medicine may have on patients. An online pharmaceuticals information service (CIMA) has been available on the AEMPS web site (página electrónica de la AEMPS[15]) since July 2009. It offers a great deal of information about each pharmaceutical, including any distribution problems that may arise (Table 5.12).

Table 5.12 Investigation of reports of pharmaceutical distribution problems, 2006-2009.

	2006	2007	2008	2009
Investigation of complaints of shortages	142	76	75	72
Number of presentations involved	306	269	236	208

Source: Annual Report AEMPS 2009.[16]

Health products

In 2009 actions related to detected cases of non-conformity increased significantly, although it was not necessary to take formal steps through AEMPS resolutions, because in most cases the non-conformity could be remedied through an agreement with the manufacturers (Table 5.13).

Table 5.13 Post-market control of health products, 2005-2009.

POST-MARKET CONTROL OF HEALTH PRODUCTS	2005	2006	2007	2008	2009
Cases of non-conformity	53	40	48	82	109
Actions taken	281	208	253	324	283
Administrative resolutions	2	----	7	7	----
Informative notes	----	----	----	----	1

Source: Annual Report AEMPS 2009.[17]

[15] See footnote 1.
[16] See footnote 1
[17] See footnote 1

5.3 Information concerning pharmaceuticals and health products

Activity of the Spanish Agency of Medicines and Health Products

The AEMPS is committed to regularly providing citizens and professionals with complete and comprehensible information about pharmaceuticals and health products, upholding criteria of transparency, independence and scientific rigor. To this end, it uses a number of different channels to communicate with citizens and professionals. Especially important among its communication efforts is the registration of authorised pharmaceuticals in the online pharmaceuticals information service (CIMA), which contains all the official, updated information regarding authorised pharmaceuticals, along with other catalogues of authorised products and manufacturing facilities and over 100 informative notes and alerts that are published every year, in addition to press releases, publications, courses, conferences and information campaigns (Table 5.14).

Every month the AEMPS posts a monthly report[18] on its web site and sends it free of charge to its subscribers. This report summarises the main news in the world of pharmaceuticals, health products and cosmetics. With an average of 500,000 documents downloaded every month by users – counting just the technical data sheets and customer inserts – the AEMPS web site[19] is gaining strength as an excellent medium for all of the Agency's communication activities.

The web site is an important tool in reaching the Agency's aim of transparency and also for increasing its agility and proximity to society. Part of this endeavour is the introduction of electronic administration, offering electronic access by companies and professionals to administrative procedures, through the Virtual Office of the AEMPS.

Table 5.14 Main communication actions by AEMPS, 2008-2009.

TYPE OF ACTION	2008	2009
Informative notes and alerts issued	118	134
Publications	5	22
Organisation of courses and informative conferences for personnel outside the AEMPS	14	18

Source: Annual Report AEMPS 2009.[20]

AEMPS Observatory of Pharmaceutical Use

The Observatory of Pharmaceutical Use is an initiative of the Spanish Agency of Medicines and Health Products (AEMPS), acting in collaboration with the Directorate

[18] To access the monthly AEMPS report online, go to: [http://www.aemps.es/actividad/notaMensual/historicoNotas.htm]

[19] See footnote 1

[20] See footnote 1

General for Pharmaceuticals and Health Products (DGFPS) of the Ministry of Health, Social Policy and Equality. Its purpose is to provide health professionals, the scientific community and citizens in general with data concerning the use of pharmaceuticals financed by the SNS and used outside of hospitals.

Studies on pharmaceutical use can be helpful in understanding the patterns of use of different pharmaceuticals and their evolution over time and in comparing data from different regions and countries, thus contributing to a more rational use of pharmaceuticals. In addition, they can sometimes be used to analyse the frequency and distribution of certain diseases, to identify possible spheres of intervention or to evaluate the various interventions or measures that have been put in place (for example, in the area of pharmacovigilance).

The technical reports drawn up in relation to these studies can be organised either by therapeutic group or by pharmacological class, depending on the practical significance that one choice or the other may have.

In 2009, the AEMPS web site[21] published the reports corresponding to 15 therapeutic groups: antibiotics, insulins and oral antidiabetics, non-steroidal antiinflammatory (NSAI) agents, non-opioid analgesics, ansiolitics and hypnotics, antiaggregants and anticoagulants, medication to combat asthma and COPD, antiepileptics, antihypertensives, antimigraine agents, antiparkinson agents, antipsychotics, antiulcerants, hypolipidemic agents and opioids.

Pharmaceutical information in the SNS

Throughout the SNS, the subject of pharmaceutical and health product information intended for health professionals is addressed by both the Ministry of Health, Social Policy and Equality and by most of the autonomous communities. To encourage the rational use of pharmaceuticals, there are a number of publications available to professionals: fact sheets about new therapeutic measures, informative notes, pharmacotherapeutic guides, pharmaceutical evaluation sheets, therapeutic information bulletins, monographs about revisions of pharmaceuticals, the pharmacovigilance bulletin, the prevention of medication errors and adverse reactions. The Ministry of Health, Social Policy and Equality publishes the SNS Therapeutic Information Bulletin, a quarterly publication that provides health professionals with updated and independent information about pharmaceuticals. Table 5.15 lists the publications of the various autonomous communities.

[21] See footnote 1

Table 5.15 Información de medicamentos y productos sanitarios en las CCAA. 2009.

--	NAME	PUBLICATIONS	CONTENT	ACCESS
Andalucía	*CADIME -Centro Andaluz de Documentación e Información de Medicamentos* (Andalusian Centre for Pharmaceutical Documentation and Information)	*Boletín Terapéutico Andaluz (BTA)* – Andalusian Therapeutic Bulletin	Published every two months. Consists of reviews of pharmaceuticals and their use	http://www.easp.es/web/cadime/cadime_documentos.asp
		BTA Monographs	Published every six months. Addresses lengthier topics	
		Ficha de novedad terapéutica (Therapeutic novelty fact sheets)	Published every two months. Provides information about new active ingredients and new indications	
Aragón	*Portal de información del medicamento* (Pharmaceutical information portal)	PHARMAKON	Published every month. Consists of evaluations of new pharmaceuticals	http://portal.aragon.es/portal/page/portal/SAS/PROFESIONAL/MEDICAMENTO
		Boletín de Información terapéutica (Therapeutic Information Bulletin)	Published quarterly. Consists of reviews of pharmaceuticals and their use	
		FARMABOLETIN (Pharmaceutical Bulletin)	Electronic edition. Provides current, relevant information	
Asturias	ASTURSALUD	Pharmaceutical information page with link to CIMA, the online pharmaceutical information service of the AEMPS	Information on authorised pharmaceuticals in Spain, fact sheet, indications, dosage	http://www.asturias.es/portal/site/astursalud/menuitem.b51f8585435b6bcaee65750268414ea0/?vgnextoid=d7e9229f27b5321OVgnVCM10000097030a0aRCRD
Baleares	Regional Health Service	Bulletin EL COMPRIMIDO	For health professionals. Contains objective information about pharmaceuticals and pharmacotherapy	http://www.elcomprimido.com/
Canarias	Web site of Regional Health Service - Rational Use of Pharmaceuticals	BOLCAN	Rational use of pharmaceuticals	http://www2.gobiernodecanarias.org/sanidad/scs/organica.jsp?idCarpeta=de2c17c2-af32-11dd-a7d2-0594d2361b6c
		INFARMA	Informative notes on pharmacotherapeutics	
Cantabria	Web site of Regional Health Service	Rational Use of Pharmaceuticals Bulletin	Reviews the scientific evidence on pharmaceuticals and health products	http://www.scsalud.es/publicaciones/ver.php?Id=4&W=4&Q=1
Castilla y León	Health Portal of Castilla y León	SACYLITE	Contributes to the rational use of pharmaceuticals. Therapeutics information bulletin. Free of charge	http://www.salud.jcyl.es/sanidad/cm

		SACYLIME	Information about pharmaceuticals	
		SACYLIPE	Information for patients	
		OJO DE MARKOV	Especially new or important reviews regarding clinical practice	
Castilla-La Mancha	Web site of Regional Health Service	*Guía Farmacoterapéutica* (Pharmacotherapeutics Guide)	Provides prescribing assistance: suitability, administration, safety, efficacy…	http://sescam.jccm.es/web1/profHome.do?main=/profesionales/farmacia/usoRacional/boletinesFarmacoterapeúticos.html
		Boletines Fármaco terapéuticos (Pharmacotherapeutics Bulletins)	Published every two months. Reviews about pharmaceuticals, their use, relevant pathologies	
		Hojas de Evaluación de Medicamentos (Pharmaceutical Evaluation Sheets)	Published every two months. Information about new active ingredients, new indications and new administration routes	
		Seguridad del Medicamento (Pharmaceutical Safety)	Alerts and notes about pharmaceuticals, published by AEMPS	
Cataluña	CEDIMCAT - *Centro de Información de Medicamentos en Cataluña* (Pharmaceutical Information Centre in Cataluña)	*Boletín Información Terapéutica (BIT)* - Therapeutic Information Bulletin		http://www.cedimcat.info/html/ca/dir1527/index.html
		Bulletin for the prevention of medication errors		
		Pharmacolovigilance Bulletin of Cataluña		
		Bulletin E-Farma of the Health Region of Barcelona		
	Catalan Pharmacology Institute Foundation	Bulletin GROC	About adverse drug reactions. Since 2003 it also includes various other aspects related to the use of pharmaceuticals. Member of an international network (ISDB) about pharmaceuticals and therapeutics. Five issues published every year.	http://www.icf.uab.es/informacion/boletines/bg/asp/bg_e.asp
Comunidad Valenciana	Web site of Regional Department of Health	Pharmacotherapeutics information	Objective and independent information to contribute to the rational use of pharmaceuticals	http://www.san.gva.es/cas/prof/dgf/homedgf.html
		Pharmacovigilance Bulletin	Safety in the use of pharmaceuticals and the activities of the Spanish Pharmacovigilance System	
		Evaluation sheets about therapeutic novelties	Summary of the role of the new pharmaceuticals, the best way to use them	

		Pharmaceutical and prosthetics benefits	Indicators related to this area	
		Regulation and monitoring of pharmaceutical products	For professionals interested in the activity of the health authorities in the area of pharmaceutical products	
		Therapeutic observatories	Use of pharmaceuticals linked to morbidity	
Extremadura	Regional Health Service	Bulletin on pharmacovigilance	Published every six months. Informative pharmacotherapeutic notes. Adverse drug reactions.	- Printed publication. - Web site of Regional Health Service: http://portal.ses.rts/portal/
Galicia	Web site of Regional Department of Health and Regional Health Service	Bulletin on the evaluation of new pharmaceuticals	Pharmacotherapeutics evaluation	http://www.galiciasaude.es/MostrarContidos_N2_T01.ASPX?idPaxina=60010
		Safety alerts regarding pharmaceuticals for human use		
		Pharmacovigilance bulletins	Safety of pharmaceuticals for human use	http://www.galiciasaude.es/MostrarContidos_N2_T01.ASPX?idPaxina=60010
Madrid	Health Portal (SaludMadrid)	RAM Bulletin	Published every four months. Results of the spontaneous notification programme and pharmacovigilance activities	http://www.madrid.org/cs/Satellite?cid=1163519345420&language=es&pagename=PortalSalud%2FPage%2FPTSA_pintarContenidoFinal&vest=1156827010240
		Pharmacotherapeutic notes	Information about pharmaceuticals provided by primary care doctors and pharmacists. Pharmaceutical updates	
		Therapeutic Information Bulletin	Therapuetic novelties, safety alerts and rational use of pharmaceuticals	
		Report on Pharmacotherapeutic Novelties	New pharmaceuticals authorised and further information about pharmaceuticals included	
Murcia	Health Portal (MURCIA+SALUD) CIEMPS *Centro de Información y Evaluación de Medicamentos y Productos Sanitarios* (Centre for Information and Evaluation of Pharmaceuticals and Health Products)	Pharmacovigilance Bulletin of Murcia	Spontaneous notification of pharmaceuticals and pharmacovigilance activities	http://www.murciasalud.es/pagina.php?id=112094&idsec=3054&expand=1
		Pharmacotherapeutic evaluation bulletin of Murcia	News in active ingredients, reviews of pharmaceutical groups	

Navarra	Portal of the Regional Health Service Osasunbidea	Pharmacotherapeutic Information Bulletin of Navarra	Published five times a year. Promotes rational use of pharmaceuticals, informs about treatment of pathologies of general interest. Member of the International Society of Drug Bulletins (ISDB). Published in paper and electronic format. Electronic version in English	http://www.navarra.es/home_es/Temas/Portal+de+la+Salud/Profesionales/Documentacion+y+publicaciones/Publicaciones+tematicas/Medicamento/.
		Evaluation of new pharmaceuticals	Evaluation of new pharmaceuticals marketed in Spain. Evaluation is co-ordinated with other committees of the same type	
		Updates in pharmacotherapeutics	Information from recent scientific articles	
		Pharmaceutical safety. Pharmacovigilance Bulletin	Notification of adverse reactions, news and recommendations on pharmaceutical use, detailed information about adverse reactions, communiqués from the Spanish Pharmacovigilance System	
País Vasco	Health Portal - OSANET CEVIME-MIEZ (Basque Pharmaceutical Information Centre)	New pharmaceuticals	Information about new pharmaceuticals marketed in Spain	http://www.osanet.euskadi.net/r85-20337/es/contenidos/informacion/infac/es_1223/infac_c.html
		Notes on pharmaceutical safety		
		Pharmacotherapeutics information-INFAC	Published every month. Reviews of pharmacological treatment for different pathologies, pharmaceuticals	
La Rioja	Portal of the Regional Health Service	Evaluations of new pharmaceuticals		http://www.riojasalud.es/profesionales/farmacia
		Pharmacovigilance Bulletin of Rioja		
		Pharmacotherapeutics Bulletin of Rioja		
		Pharmacy alerts		
Source	Information provided by the autonomous communities for this report.			

5.4 Pharmaceutical benefits in the SNS

Analysis of pharmaceutical consumption linked to SNS medical prescriptions

Pharmaceutical benefits for non-hospitalised patients include the medicinal and health products financed by the SNS, as well as extemporaneous compounds, officinal preparations and individualised anti-allergy and anti-bacterial vaccines developed in compliance with current legislation. For the prescription of these pharmaceutical products the corresponding official SNS medical prescription must be used and the products must be dispensed through pharmacies.

This section analyses pharmaceutical benefits for non-hospitalised patients only. Data regarding the consumption of pharmaceuticals services in non-hospital settings was

obtained from the information contained in the official medical prescriptions invoiced to the SNS by dispensing pharmacies in each autonomous community. The Alcántara computer application was used to statistically exploit this information.

Pharmaceutical expenditure and health expenditure

One of the items comprising public sector health expenditure is the pharmaceutical expenditure linked to SNS medical prescriptions. Both the total public expenditure on health and the pharmaceutical expenditure have grown in recent years, but the proportion of the latter – expenditure linked to SNS-financed prescriptions – in the total has decreased. Thus, although in 2004 pharmaceutical expenditure represented 20.53% of the total and in 2008 it represented 17.96%, this item clearly remains a significant part of the health expenditure as a whole (Table 5.16).

Table 5.16 Health expenditure and pharmaceutical expenditure, 2004-2009.

	2004	2005	2006	2007	2008	2009
Total public expenditure on health (millions of Euros) (1)	46,348.68	50,586.84	55,683.29	60,222.49 (*)	66,657.76 (*)	(**)
Pharmaceutical expenditure on SNS medical prescriptions (millions of Euros) (2)	9,515.36	10,051.33	10,636.06	11,191.07	11,970.96	12,505.69
% pharmaceutical expenditure/total health expenditure	20.53	19.87	19.10	18.58	17.96	
Notes	(*) Provisional figures. (**) Figure not available.					
Source	(1) Public Expenditure on Health Statistical Report (Actual Expenditure) (2) Medical prescription invoicing statistics. Pharmaceutical expenditure is the total retail value of pharmacy dispensation minus the co-payments made by users and by dispensing pharmacies..					

To compare Spain's figures to those of other countries, Table 5.17 shows the evolution of pharmaceutical expenditure as a percentage of total health expenditure in other OECD countries.

The percentages that this table indicates for Spain do not coincide with those of Table 5.16, because OECD data takes into account the costs of long-term units and the expense of prescriptions funded by civil servants' mutual funds. Spain is one of the OECD countries in which pharmaceutical expenditure (not including that of hospitals) represents a high proportion of health expenditure. In 1995 the percentage in Spain was 19.2%, and the figure grew every year before peaking in 2003 (at 23.2%). The following year it started to fall, reaching 20.5% in 2008.

Norway is the country with the lowest proportion of pharmaceutical expenditure in its total health expenditure (just 7.6% in 2008). A similar pattern is shown by countries such as Denmark (8.6% in 2007), Switzerland (10.3% in 2007), United Kingdom (11.8% in 2008) and the United States (11.9% in 2008).

Portugal and Italy have experienced a trend very similar to that of Spain, although the figure for Italy in 2008 was two percentage points below that of Spain. Other countries with high figures are Japan (20.1% in 2007), Poland (22.6% in 2008) and Greece (24.8% in 2007).

The other countries indicated in the table (Sweden, Iceland, Finland, Germany, France and Canada) show intermediate values, ranging from Sweden's 13.2% to 17.1% in Canada.

Table 5.17 **Evolution of the pharmaceutical expenditure as a percentage of the total health expenditure. International comparison, 1995-2009.**

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Germany	12.9	13	13.1	13.6	13.5	13.6	14.2	14.4	14.4	13.9	15.1	14.8	15.1	15.1	
Canada	13.8	14	14.8	15.3	15.6	15.9	16.2	16.6	17	17.3	17.2	17.3	17.2	17.2	17.1
Denmark	9.1	8.9	9	9	8.7	8.8	9.2	9.8	9.1	8.7	8.6	8.5	8.6		
Spain	19.2	19.8	20.8	21	21.5	21.3	21.1	21.8	23.2	22.7	22.3	21.6	21	20.5	
US	8.7	9	9.5	10	10.8	11.3	11.7	12	12.1	12.2	12	12.2	12	11.9	
Finland	12.7	13.2	13.6	14	14.8	14.7	15	15.2	15.3	15.5	15.5	14.3	14.1	14.4	
France	15	14.8	15	15.5	16	16.5	16.9	16.8	16.7	16.8	16.7	16.5	16.5	16.4	
Greece	15.7	16.1	16.2	13.9	14.4	18.9	18	18.8	20.4	22	21.5	22.7	24.8		
Iceland	13.4	14	15.1	14.1	13.6	14.5	14.1	14	15.2	15.4	14.4	14.2	13.5	13.9	
Italy	20.7	21.1	21.2	21.5	22.1	22	22.5	22.5	21.8	21.2	20.2	19.8	19.3	18.4	18.3
Japan	22.3	21.6	20.6	18.9	18.4	18.7	18.8	18.4	19.2	19	19.8	19.6	20.1		
Norway	9	9.1	9.1	8.9	8.9	9.5	9.3	9.4	9.2	9.4	9.1	8.7	8	7.6	
Poland								28.4	30.3	29.6	28	27.2	24.5	22.6	
Portugal	23.6	23.8	23.8	23.4		22.4	23	23.3	21.4	21.8	21.6	21.8			
UK	15.3	15.6	15.9			14.1	13.9	13.5	13.5	13.2	12.8	12.3	12.2	11.8	
Sweden	12.3	13.6	12.4	13.6	13.9	13.8	13.9	14	13.8	13.9	13.7	13.7	13.4	13.2	
Switzerland	10.1	10.2	10.5	10.4	10.6	10.8	10.7	10.4	10.6	10.5	10.6	10.4	10.3		

Source OECD Health Data 2010.

Number of prescriptions, expenditure, retail value in pharmacy and user co-payments.

Table 5.18 presents data regarding the prescriptions invoiced to the SNS, pharmaceutical expenditure,[22] the total retail value of pharmacy dispensation[23] and user co-payments, for the 2000-2009 period.

In Spain, pharmaceutical expenditure through SNS medical prescriptions has grown 86% over the last ten years, moving from 6,723.64 million Euros invoiced to the SNS in 2000 to 12,505.69 million Euros in 2009. The tendency was towards increased expenditure between 2000 and 2003, the year showing greatest growth (12.14%). In 2004 there was a considerable decrease in the growth rate (6.42%) and in subsequent years there has been a stable trend towards moderate growth. In 2009, the percentage of growth was the lowest in the period analysed, 4.47% over the previous year.

The reference price system, prescription by active ingredient – by which the lowest-priced pharmaceutical is the one dispensed –, the reduction in distribution margins and the reduction in the margins and deductions corresponding to pharmaceutical dispensation, in addition to regional programmes to bring about a more rational use of pharmaceuticals, have all contributed to the containment of the pharmaceutical expenditure and to achieving moderation in this area.

[22] Expenditure: this is the amount in Euros actually paid by the health system for the medicinal and health products dispensed in pharmacies. It is calculated by taking the total retail value (including VAT) of dispensed pharmaceuticals and subtracting the co-payments made by users and by dispensing pharmacies.

[23] Total retail value: this is total amount spent in Euros for the medicinal and health products dispensed in pharmacies and invoiced to the SNS, calculated at their retail price (including VAT).

The number of prescriptions invoiced to the SNS evolved similarly. During 2002 and 2003 there was intense growth in the number of prescriptions, with increases of 6.39% and 6.83% respectively. Starting in 2004, this tendency changed and the growth rate fell to 3.18%. Starting in 2005, the rate became stable, with an increase of 4.94% in 2009 over 2008.

Although the economic contribution by users to the price of the pharmaceutical products has increased by 56% in the ten-year period analysed, the specific weight of user contributions in the total retail value in pharmacy has been decreasing. In 2009, this percentage was 5.86%, the lowest in all the years studied.

Table 5.19 shows the data on the invoicing of 2009 medical prescriptions by autonomous communities. The different accounting criteria used by the various regions in calculating their pharmaceutical expenditure mean that the data shown may not be entirely comparable for certain communities, since in some cases dietetic therapy products or urinary incontinence pads are not included and in others the use of e-prescribing might alter the number of prescriptions invoiced. For the national total, the increase in the number of prescriptions with respect to the preceding year was 4.94%, with Baleares, Asturias and Cataluña being the regions with the lowest increases. The percentage of the user contribution in the total retail value varies from between 7.52% in Ceuta and 4.54% in Asturias.

Table 5.18 Number of prescriptions, expenditure, total retail value and user co-payments. Evolution 2000-2009.

Year	National total								
	Num. prescriptions (millions)		Expenditure (*) (millions of Euros)		Total retail value (**) (millions of Euros)		User contribution (millions of Euros)		User contribution as % of total retail value
		% Δ Preceding year		% Δ Preceding year		% Δ Preceding year		% Δ Preceding year	
2000	596.81	4.8	6,723.64	7.46	7.307.22	8.20	520.57	4.75	7.12
2001	621.42	4.12	7,255.01	7.90	8.005.69	9.56	559.72	7.52	6.99
2002	661.16	6.39	7,972.89	9.89	8.818.35	10. 5	607.67	8.57	6.89
2003	706.2	6.82	8,941.12	12.14	9.927.33	12.58	679.73	11.86	6.85
2004	728.68	3.18	9,515.36	6.42	10.499.93	5.77	669.17	-1.55	6.37
2005	764.63	4.93	10,051.33	5.63	11,105.10	5.76	694.80	3.83	6.26
2006	796.02	4.10	10,636.06	5.82	11,757.73	5.88	720.42	3.69	6.13
2007	843.37	5.95	11,191.07	5.22	12,377.05	5.27	749.28	4.01	6.05
2008	890.04	5.53	11,970.96	6.97	13,241.82	6.99	780.28	4.14	5.89
2009	934.00	4.94	12,505.69	4.47	13,850.86	4.60	811.90	4.05	5.86

Notes: (*) Pharmaceutical expenditure is the total retail value of pharmacy dispensation minus the co-payments made by users and by dispensing pharmacies. (**) Total amount spent on pharmacy dispensation, calculated at retail prices including VAT.

Source: Medical prescription invoicing statistics.

Table 5.19 Number of prescriptions, expenditure, total retail value and user co-payments, by autonomous community. 2009.

Autonomous community	2009							
	Number of prescriptions (millions)	% Δ 09/08	Expenditure (*) (millions of Euros)	% Δ 09/08	Total retail value (**) (millions of Euros)	% Δ 09/08	User contribution (millions of Euros)	User contrib as % of total amount
Andalucía	173.56	6.33	2,060.99	5.37	2,278.53	5.30	139.07	6.10
Aragón	28.45	4.60	409.67	4.69	451.20	4.89	25.14	5.57
Asturias	24.51	3.07	352.79	4.22	388.57	4.24	17.65	4.54
Baleares	15.54	1.57	222.88	5.42	248.94	5.65	16.85	6.77
Canarias	40.82	6.74	569.91	7.21	642.59	7.31	41.41	6.44
Cantabria	11.62	3.82	160.33	4.22	176.62	4.29	9.61	5.44
Castilla y León	51.25	3.73	741.31	5.23	803.62	5.12	40.25	5.01
Castilla-La Mancha	44.38	5.53	614.33	5.20	673.71	5.41	38.75	5.75
Cataluña	147.58	3.16	1,884.52	2.35	2,078.81	2.39	113.09	5.44
C. Valenciana	111.79	4.50	1,604.87	3.06	1,791.64	3.48	103.98	5.80
Extremadura	25.61	8.08	358.61	8.86	393.40	8.92	22.96	5.84
Galicia	63.37	5.41	924.70	6.36	1,032.17	6.46	56.04	5.43
Madrid	103.90	6.03	1,318.47	5.21	1,460.96	5.36	100.52	6.88
Murcia	29.74	5.29	412.29	-0.91	468.63	0.18	31.41	6.70
Navarra	11.80	4.07	166.73	4.11	179.97	4.14	11.61	6.45
País Vasco	41.82	3.63	586.67	4.20	651.86	4.21	35.27	5.41
La Rioja	6.13	5.22	89.68	6.48	99.43	6.51	6.08	6.12
Ceuta	1.15	3.77	14.91	3.91	16.80	4.19	1.26	7.52
Melilla	0.99	5.44	12.04	3.92	13.40	4.50	0.96	7.13
National total	934.00	4.94	12,505.69	4.47	13,850.86	4.60	811.90	5.86

Notes: (*) Pharmaceutical expenditure is the total retail value of pharmacy purchases minus the co-payments made by users and by dispensing pharmacies. (**) Total amount spent on pharmacy dispensation, calculated at retail prices including VAT.

Source: Medical prescription invoicing statistics.

Average expenditure per prescription. Expenditure and number of prescriptions per capita

Table 5.20 shows the indicators related to the average amount spent by the SNS per prescription and the expenditure and number of prescriptions per capita, in the 2000-2009 period.

The average expenditure by the SNS per prescription in 2000 was €12.24 while the figure in 2009 was €14.83, an increase of 21.16%. The year 2003 showed the highest growth (5.38%) in the average amount spent per prescription as compared to the preceding year. This trend would change starting in 2004, when more moderate growth began to be observed and even some decreases, as in 2009, which registered a decrease of 0.32% compared to the preceding year. Factors involved in the moderation of the expenditure per prescription, in addition to the Ministry's price policy, were: increased prescription by active ingredient – by which the lowest-price pharmaceutical is the one dispensed – as well as the reference price system, which favours the consumption of generic products (which have a lower price than the reference pharmaceuticals) and tends to lower pharmaceutical prices.

SNS per capita expenditure on pharmaceuticals rose gradually over the ten years analysed, as the amount spent on pharmaceuticals increased by 90%, while the population according to the municipal records grew by 15.42%. In 2009 the amount spent by the SNS on pharmaceuticals per person covered was 296.30 Euros, 64.22% more than

in 2000. The growth in the amount spent per person in 2009 was the most moderate in the entire period studied, at 3.28% over the year before.

The number of prescriptions written per person per year has grown gradually; in 2000 the figure was 14.74 prescriptions while in 2009 it was 19.98. This amounts to 5.24 more prescriptions, which represents a growth of 35.55%.

Table 5.20 Average expenditure per prescription and expenditure and number of prescriptions per person covered, 2000-2009.

YEAR	NATIONAL TOTAL					
	Average expenditure per prescription (€)		Average expenditure per person (€)		Number of prescriptions per person	
		% Δ PRECEDING YEAR		% Δ PRECEDING YEAR		% Δ PRECEDING YEAR
2000	12.24	3.24	180.43	7.40	14.74	4.03
2001	12.88	5.22	194.71	7.91	15.11	2.56
2002	13.34	3.53	210.77	8.25	15.80	4.56
2003	14.06	5.38	232.41	10.26	16.53	4.63
2004	14.41	2.52	243.07	4.59	16.87	2.02
2005	1 .52	0.79	251.77	3.58	17.34	2.77
2006	14.77	1.70	262.98	4.45	17.80	2.71
2007	14.68	-0.64	273.82	4.12	18.66	4.80
2008	14.88	1.38	286.88	4.77	19.28	3.35
2009	14.83	-0.32	296.30	3.28	19.98	3.62

Source: Medical prescription invoicing statistics. Population as of 1 January each year according to data drawn from municipal records (INE).

Table 5.21 shows the indicators related to the average expenditure per prescription and the expenditure and number of prescriptions per person in 2009, by autonomous community. As indicated above, because of the different measures put in place by the regional health services the information for the autonomous communities may not be entirely comparable. The average amount spent by the SNS per prescription varies between €13.13 in Andalucía and €16.29 in Galicia. Both in the expenditure per person and in the number of prescriptions per person, the regions of Galicia, Asturias and Extremadura have the highest figures, while Melilla, Ceuta and Baleares show the lowest figures.

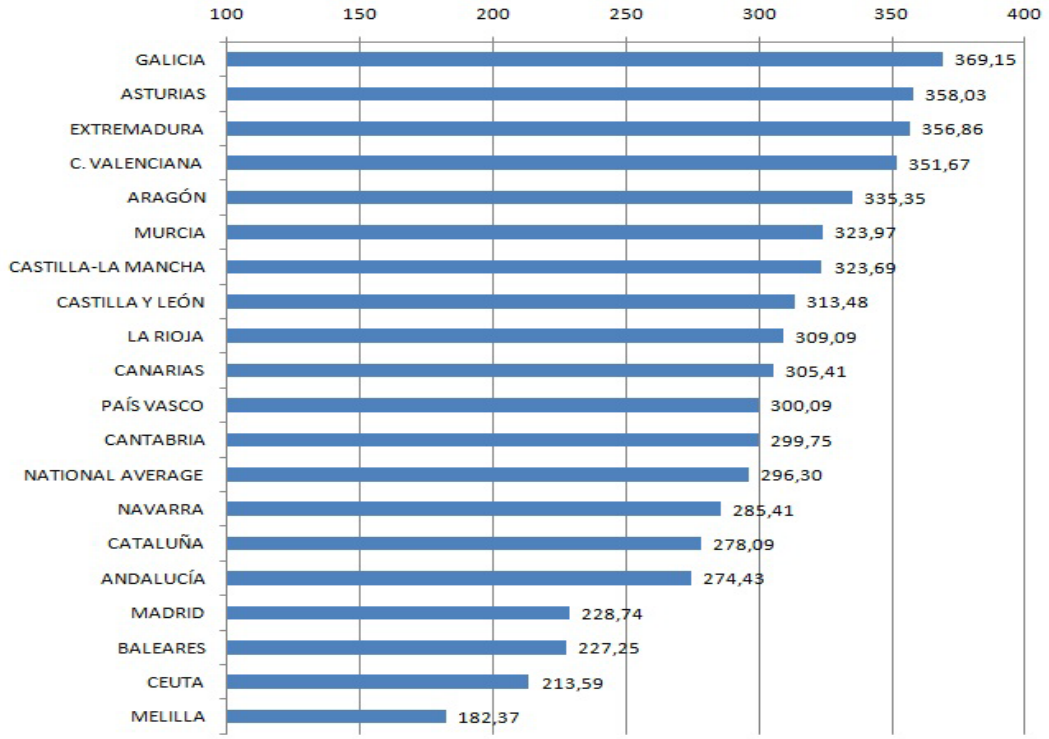
The data on the expenditure per person in 2009 in the different autonomous communities is shown in Figure 5.8.

Table 5.21 Average expenditure per prescription and expenditure and number of prescriptions per person covered and autonomous community .Year 2009.

Autonomous community	YEAR 2009					
	Average expenditure per prescription (€)		Average expenditure per person (€)		Number of prescriptions per person	
	2009	% Δ 09/08	2009	% Δ 09/08	2009	% Δ 09/08
Andalucía	13,13	-0,97	274,43	4,02	20,9	5,04
Aragón	15,86	0,27	335,35	3,44	21,14	3,16
Asturias	15,85	1,14	358,03	3,75	22,59	2,58
Baleares	16,02	4,02	227,25	3,47	14,19	-0,53
Cantabria	15,20	0,46	299,75	3,04	19,73	2,57
Castilla León	15,68	1,35	313,48	4,87	19,99	3,47
Castilla- La Mancha	15,18	-0,11	323,69	3,48	21,32	3,6
Cataluña	14,09	-0,75	278,09	0,86	19,74	1,63
Canarias	15,74	0,54	305,41	5,88	19,4	5,31
Extremadura	15,36	0,78	356,86	8,46	23,23	7,62
Galicia	16,29	1,00	369,15	6,01	22,66	4,96
Madrid	14,06	-0,64	228,74	3,46	16,27	4,12
Murcia	15,76	-4,86	323,97	-1,24	20,56	3,81
Navarra	15,25	0,07	285,41	2,46	18,72	2,38
C. Valenciana	16,03	-0,98	351,67	2,16	21,94	3,17
País Vasco	15,59	0,56	300,09	3,48	19,25	2,91
La Rioja	16,22	1,23	309,09	5,12	19,05	3,84
Ceuta	14,67	0,41	213,59	2,49	14,56	2,07
Melilla	13,59	-0,89	182,37	1,64	13,42	2,55
Total nacional	14,83	-0,32	296,30	3,28	19,98	3,62

Source Medical prescription invoicing statistics. Population as of 1 January each year according to data drawn from municipal records (INE).

Figure 5.8 Expenditure per person, by autonomous community. 2009.



Source Medical prescription invoicing statistics.

Consumption of generic medicines

Generic medicines have the same composition and pharmaceutical form and are the bioequivalents of proprietary (brand-name) pharmaceuticals. A generic pharmaceutical can be marketed once the patent of the brand-name pharmaceutical has expired. This means they are cheaper but have the same conditions of quality, security and efficacy. Generic pharmaceuticals are marked with the acronym EFG (*Equivalente Farmacéutico Genérico*). Thus, to contribute to the sustainability of the health system, the SNS has made it a priority to increase the presence and consumption of generic pharmaceuticals. The consumption of generic pharmaceuticals through SNS prescriptions has grown steadily. In the year 2009, the volume of generic packs used, relative to the pharmaceutical total, reached the figure of 23.82%, over 70% more than the percentage in 2005. The percentage of generics consumed in terms of their total retail value is 9.38%, which is less than half of generic consumption in packs Table 5.22.

The difference between these two percentages is caused by the lower average price of generics; in 2009 a generic medicine was three times cheaper than a non-generic (€5.62 as compared to €16.99).

Table 5.22 Consumption of generic pharmaceuticals through SNS medical prescriptions.

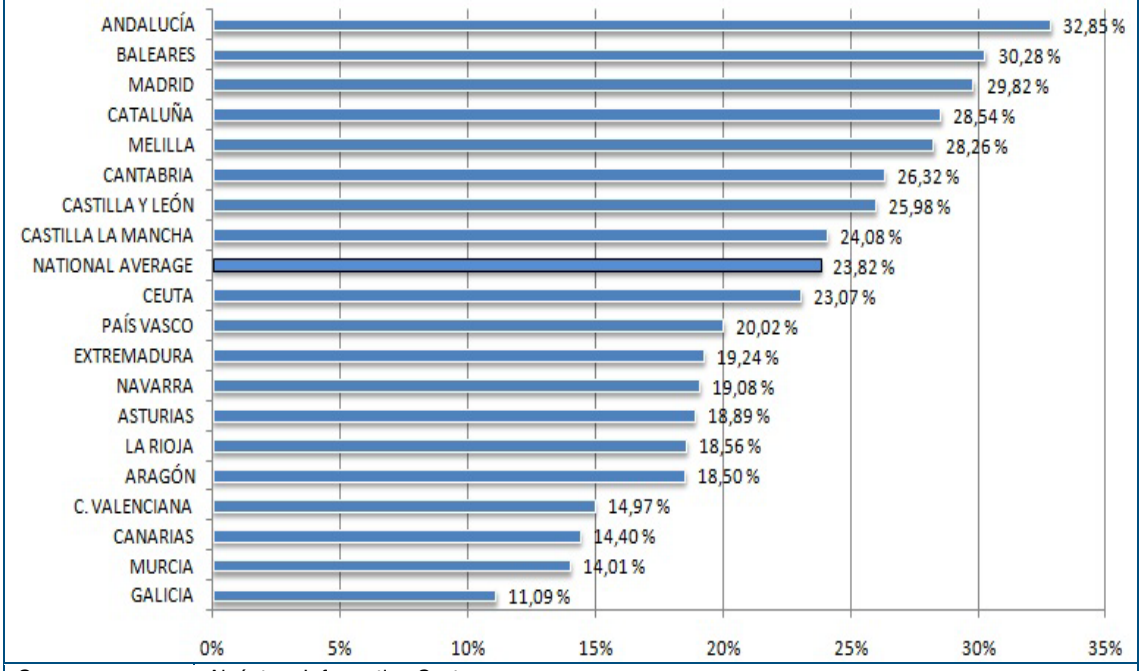
	2005	2006	2007	2008	2009
% Generic packs/Total pharmaceuticals	14.10	16.72	20.94	21.81	23.82
% Total retail value generics/ Total pharmaceuticals	7.35	8.54	9.23	9.20	9.38

Source: Alcántara Information Systems.

Although all the autonomous communities have put in place measures designed to stimulate the use of generics, there is considerable variation in the degree of market penetration of these products. In 2009, Andalucía was the autonomous community with the highest percentage of generic consumption in the total of pharmaceuticals consumed, in terms of both packs dispensed and total retail value. Next were Baleares, Madrid and Cataluña. The lowest percentages are found in Galicia, Murcia and Canarias (Figure 5.9 and Figure 5.10).

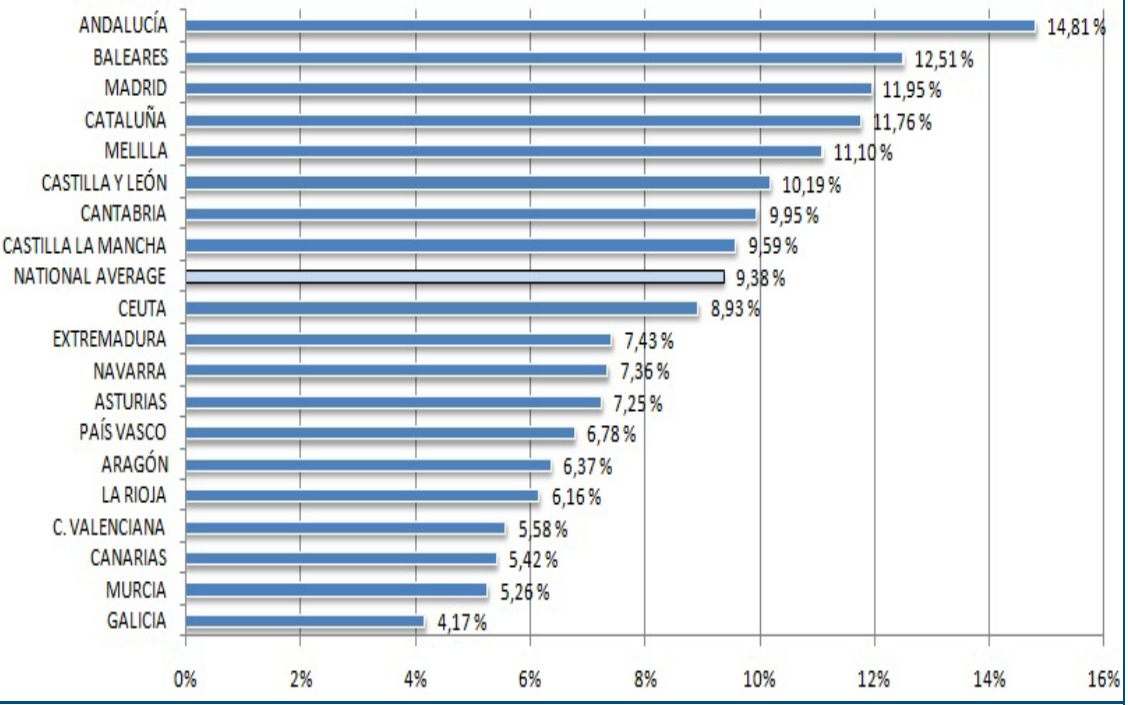
Figure 5.11 shows the consumption of generic pharmaceuticals by anatomical groups, according to ATC (Anatomical Therapeutic Chemical Classification). ATC Code J (Anti-infectives for systemic use) is the group with the highest consumption in number of packs and in total retail value, with 43.61% of packs and 30.88% of the total retail value in pharmacy. The group with the second highest use of generics is ATC Code A (Alimentary tract and metabolism), with 38.72% of packs and 15.99% of the total retail value in pharmacy.

Figure 5.9 **% Consumption of generic packs/total packs of pharmaceuticals, by autonomous community, 2009.**



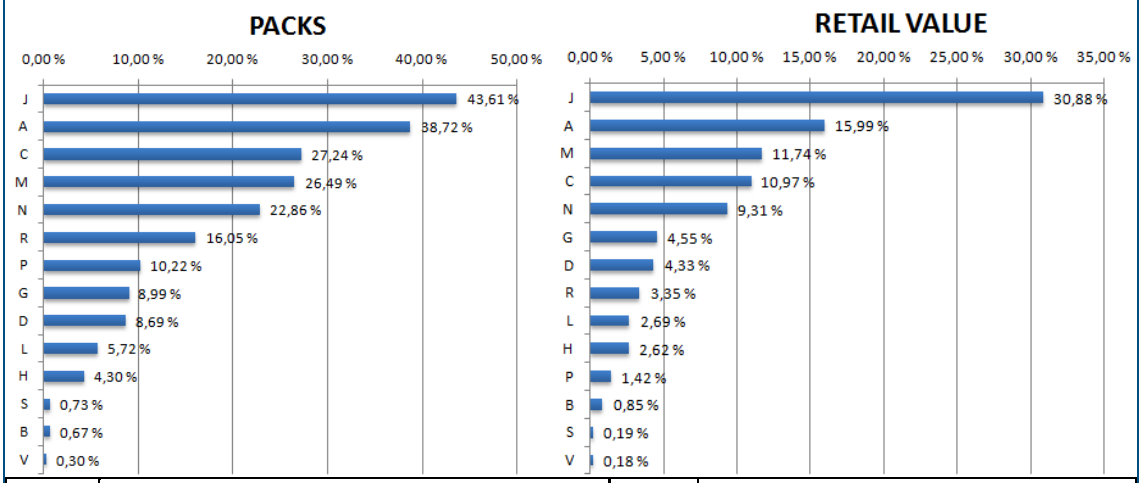
Source Alcántara Information System.

Figure 5.10 **Consumption of generics in terms of total retail value generics/total retail value all pharmaceuticals, by autonomous community, 2009.**



Source Alcántara Information System.

Figure 5.11 **Consumption of generics by anatomical groups in terms of packs and total retail value, 2009.**



ATC: A	ALIMENTARY TRACT AND METABOLISM	L	ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS
B	BLOOD AND BLOOD-FORMING ORGANS	M	MUSCULOSKELETAL SYSTEM
C	CARDIOVASCULAR SYSTEM	N	NERVOUS SYSTEM
D	DERMATOLOGICAL AGENTS	P	ANTIPARASITIC PRODUCTS, INSECTICIDES AND REPELLENTS
G	GENITOURINARY SYSTEM AND SEX HORMONES	R	RESPIRATORY SYSTEM
H	SYSTEMIC HORMONAL PREPARATIONS, EXCLUDING SEX HORMONES AND INSULINS	S	SENSORY ORGANS
J	ANTIINFECTIVES FOR SYSTEMIC USE	V	MISCELLANEOUS

Source Alcántara Information System.

Consumption of pharmaceuticals in terms of chemical therapeutic subgroups and active ingredients

Pharmaceuticals are the item with the greatest weight within the pharmaceutical benefits package provided by the SNS. They represent 98% of the prescriptions invoiced to the SNS and 96% of the total retail value of the benefits package.

Information about the use of the main therapeutic-chemical subgroups, as well as the active ingredients with highest consumption, can be obtained by examining the following data:

— Number of packs invoiced to the SNS.
— Number of DDDs (Defined Daily Dose). This is a technical measure that represents the assumed average maintenance dose per day when a drug is used for its main indication in adults. The DDD of an active ingredient is determined by the World Health Organization Collaborating Centre for Drug Statistics Methodology. The data presented herein are based on the 2010 version of the ATC/DDD.
— Total retail value of the dispensed pharmaceutical.
— The DDD/1000/day. This is the number of DDDs per 1000 inhabitants per day. In this report it is abbreviated as DDI (Daily Dose per Inhabitant). This parameter provides an estimate of how many individuals out of every 1000

are receiving a DDD of a given medicine or therapeutic subgroup. It also enables more homogeneous comparisons to be made, without regard to prices and dosage. The population figures used were taken from the municipal population records of each year, obtained from the National Statistics Institute (INE).

— DTC (Daily Treatment Cost) is the ratio of consumption as measured by that pharmaceutical's total retail value and the number of DDDs used. This indicates the real cost of the DDD of each active ingredient or therapeutic subgroup.

The analysis here focuses on the behaviour of the 10 subgroups or active ingredients with the greatest consumption in terms of units sold, and also on that of the subgroups or active ingredients with the highest retail values. This criteria was chosen instead of the subgroups or active ingredients with highest consumption in terms of number of DDDs, because some active ingredients do not yet have a DDD so in a study on overall consumption patterns this parameter cannot be used to study utilisation.

By chemical therapeutic subgroups (ATC 4)

The ten subgroups with highest consumption in number of packs dispensed in 2009 are listed in Table 5.23. The consumption of packs from these 10 subgroups represents over 36% of the total number of units of medicine sold.

Of these 10 subgroups, A02BC (Antiulcerants: proton pump inhibitors) is the one with the highest DDD/1000/day (106.07), followed by C10AA (64.93) and C09AA (59.53).

As regards DTC, the highest is that of subgroup C10AA, Hypolipidemic agents: HMG CoA reductase inhibitors (€0.83), while C09AA (Agents acting on the renin-angiotensin system: ACE inhibitors, plain) is the subgroup with the lowest DTC (€0.11).

Table 5.24 shows the DDD/1000/day of these subgroups over the five-year period from 2005 to 2009. There has been an annual increase in all the subgroups.

Table 5.23 The ten therapeutic subgroups with greatest consumption in packs, 2009.

SUBGROUP ATC4		Number of packs (millions)	Number of DDDs (millions)	DDI	Total retail value (millions of Euros)	DTC (€)
A02BC	Antiulcerants: proton pump inhibitors	65.05	1,8 9.79	106.07	636.81	0.35
N05BA	Ansiolitics: benzodiazepine derivatives	46.88	859.45	50.37	119.11	0.14
C10AA	Hypolipidemic agents: HMG CoA reductase inhibitors	43.33	1,107.94	64.93	915.38	0.83
N02BE	Analgesics and antipyretics: Anilides	38.85	346.27	20.29	110.79	0.32
M01AE	Non-steroidal anti inflammatory drugs: propionic acid derivatives	33.36	567.25	33.25	158.98	0.28
B01AC	Platelet aggregation inhibitors. excl. heparin	30.27	855.59	50.15	362.12	0.42
C09AA	ACE inhibitors, plain	20.83	1,015.76	59.53	112.04	0.11
C09CA	Angiotensin II antagonists, plain	19.28	898.26	52.65	522.38	0.58
N06AB	Antidepressants: selective serotonin reuptake inhibitors	17.69	690.49	40.47	342.89	0.50
R05CB	Mucolytics	16.72	269.49	15.79	61.58	0.23
Notes	DDD: Defined Daily Dose. DDI: Daily Dose per Inhabitant (DDD/1000/day). DTC: Daily Treatment Cost					
Source	Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).					

The use of Antiulcerants: proton pump inhibitors, A02BC, has grown over 78% in this five-year period, from a DDD/1000/day of 59.45 in 2005 to 106.07 in 2009, due to the high prevalence of disorders in which these pharmaceuticals are effective. There are currently five proton pump inhibitors available in Spain (Omeprazole, Pantoprazole, Lansoprazole, Rabeprazole and Esomeprazole). Omeprazole is the most commonly used anti-ulcerant in this subgroup (80% of the total).

The subgroup C10AA (Hypolipidemic agents: HMG CoA reductase inhibitors), the drugs of choice for the treatment of high cholesterol, has also shown intense growth in its DDD/1000/day over these five years (72%), moving from 37.72 in 2005 to 64.93 in 2009. Of the pharmaceuticals in this subgroup currently marketed in Spain, the most widely used are Atorvastatin and Simvastatin (which represent 47% and 33%, repectively, of the total consumption of this subgroup).

Regarding the subgroups with the highest consumption in terms of total retail value, Table 5.25 shows the top 10 subgroups, which represent 36% of the total retail value of all pharmaceuticals dispensed. The subgroup with the highest retail value is C10AA, Hypolipidemic agents: HMG CoA reductase inhibitors, with 915.38 million Euros, almost 7% of the pharmaceutical total. Ranked second are Antiulcerants: proton pump inhibitors, A02BC, which total 636.81 million Euros. The table shows the five subgroups with the highest consumption in packs and it also introduces five subgroups with low DDD/1000/day but whose pharmaceuticals are expensive, as shown by their high DTC. This is the case of N03AX (Other antiepileptics) which has a DTC of €3.25, and of R03AK (Adrenergic agents and other drugs for obstructive airway diseases) with a DTC of €2.28.

Table 5.24 **Evolution of the number of DDI of the therapeutic subgroups with highest consumption in packs, 2005-2009.**

SUBGROUP ATC4		2005	2006	2007	2008	20 9
A02BC	Antiulcerants: proton pump inhibitors	59.45	74.97	86.11	96.02	106.07
N05BA	Ansiolitics: benzodiazepine derivatives	45.30	47.31	48.56	49.13	50.37
C10AA	Hypolipidemic agents: HMG CoA reductase inhibitors	37.72	43.85	50.02	56.66	64.93
N02BE	Analgesics and antipyretics: anilides	15.19	15.51	17.81	19.00	20.29
M01AE	Non-steroid antiinflammatory drugs: propionic acid derivatives	26.45	28.57	30.98	31.59	33.25
B01AC	Platelet aggregation inhibitors, excl. heparin	39.60	42.38	45.13	47.37	50.15
C09AA	ACE inhibitors, plain	54.16	57.68	58.44	58.66	59.53
C09CA	Angiotensin II antagonists, plain	36.12	40.33	44.52	48.83	52.65
N06AB	Antidepressants: selective serotonin reuptake inhibitors	33.93	36.23	37.58	38.61	40.47
R05CB	Mucolytics	13.04	12.60	14.68	14.60	15.79
Notes	DDI: Daily Dose per Inhabitant (DDD/1000/day).					
Source	Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).					

Table 5.26 presents the evolution in amount spent over a five-year period (from 2005 to 2009), for the 10 subgroups with highest consumption in terms of amount spent on them and Table 5.27 shows how their DTC have evolved over this period.

All the subgroups have grown in terms of total retail value, except N06AB (Antidepressants: selective serotonin reuptake inhibitors) which has fallen 20% due to the DTC of the active ingredients of these groups decreasing significantly (over 37%) during these five years, from €0.79 in 2005 to €0.50 in 2009 (Table 5.26 and Table 5.27).

C09DA (Angiotensin II antagonists and diuretics) is the subgroup showing the greatest increase in its total retail value over these five years, 80% (Table 5.26). The DTC of this subgroup rose from €1.04 in 2005 to €1.07 in 2008, since the most widely-consumed active ingredients in this group include combinations comprising diuretics and Valsartan or Irbesartan, which are the combinations with the highest DTC (Table 5.27).

Table 5.26 shows another subgroup of antidepressants, N06AX (Other antidepressants) which has shown intense growth in their total retail value over these five years (74%). The DTC of N06AX has fallen somewhat (6.5%) over the five years studied, moving from €1.41 in 2005 to €1.32 in 2009 (Table 5.27). New active ingredients with high DTC, such as Duloxetine or Bupropion, have been added to this subgroup.

The subgroup A02BC (Antiulcerants: proton pump inhibitors) shows the greatest decrease in DTC (39%) over the period studied, having fallen from €0.58 in 2005 to €0.35 in 2009 (Table 5.27).

Table 5.25 The ten therapeutic subgroups with greatest consumption in total retail value, 2009.

SUBGROUP ATC4		Number of packs (millions)	Number of DDD (millions)	DDI	Total retail value (millions of Euros)	DTC (€)
C10AA	Hypolipidemic agents: HMG CoA reductase inhibitors	43.33	1,107.94	64.93	915.38	0.83
A02BC	Antiulcerants: proton pump inhibitors	65.05	1,809.79	106.07	636.81	0.35
R03AK	Adrenergic agents and other drugs for obstructive airway diseases	8.18	245.68	14.40	559.76	2.28
C09CA	Angiotensin II antagonists, plain	19.28	898.26	52.65	522.38	0.58
C09DA	Angiotensin II antagonists and diuretics	14.50	405.91	23.79	432.37	1.07
N03AX	Other antiepileptic agents	6.96	119.43	7.00	388.14	3.25
B01AC	Platelet aggregation inhibitors, excl. heparin	30.27	855.59	50.15	362.12	0.42
N06AB	Antidepressants: selective serotonin reuptake inhibitors	17.69	690.49	40.47	342.89	0.50
N06AX	Other antidepressants	9.50	248.70	14.58	327.87	1.32
M05BA	Bisphosphonates	8.93	255.59	14.98	286.05	1.12

Notes: DDD: Defined Daily Dose. DDI: Daily Dose per Inhabitant (DDD/1000/day). DTC: Daily Treatment Cost

Source: Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).

Table 5.26 Evolution of therapeutic subgroups with highest consumption in terms of total retail value, 2005-2009.

TOTAL RETAIL VALUE (millions of Euros), 2005-2009.						
SUBGROUP ATC4		2005	2006	2007	2008	2009
C10AA	Hypolipidemic agents: HMG CoA reductase inhibitors	727.03	781.62	789.15	858.58	915.38
A02BC	Antiulcerants: proton pump inhibitors	552.89	627.60	631.04	647.11	636.81
R03AK	Adrenergic agents and other drugs for obstructive airway diseases	398.30	424.52	475.68	517.43	559.76
C09CA	Angiotensin II antagonists, plain	394.52	424.50	446.53	500.70	522.38
C09DA	Angiotensin II antagonists and diuretics	240.29	291.07	345.63	401.90	432.37
N03AX	Other antiepileptic agents	233.74	287.72	317.53	351.08	388.14
B01AC	Platelet aggregation inhibitors, excl. heparin	288.46	308.20	323.24	346.23	362.12
N06AB	Antidepressants: selective serotonin reuptake inhibitors	430.05	438.36	382.38	356.28	342.89
N06AX	Other antidepressants	188.66	229.01	270.28	301.12	327.87
M05BA	Bisphosphonates	254.28	249.45	240.45	271.07	286.05

Source: Alcántara Information System.

Table 5.27 Evolution of DTC in subgroups with highest consumption in terms of total retail value, 2005-2009.

SUBGROUP ATC4		2005	2006	2007	2008	2009
C10AA	Hypolipidemic agents: HMG CoA reductase inhibitors	1.20	1.09	0.96	0.89	0.83
A02BC	Antiulcerants: proton pump inhibitors	0.58	0.51	0.44	0.39	0.35
R03AK	Adrenergic agents and other drugs for obstructive airway diseases	2.09	2.06	2.09	2.27	2.28
C09CA	Angiotensin II antagonists, plain	0.68	0.65	0.61	0.60	0.58
C09DA	Angiotensin II antagonists and diuretics	1.04	1.03	1.04	1.06	1.07
N03AX	Other antiepileptic agents	4.12	3.94	3.58	3.33	3.25
B01AC	Platelet aggregation inhibitors, excl. heparin	0.45	0.45	0.43	0.43	0.42
N06AB	Antidepressants: selective serotonin reuptake inhibitors	0.79	0.74	0.62	0.54	0.50
N06AX	Other antidepressants	1.41	1.40	1.37	1.35	1.32
M05BA	Bisphosphonates	1.48	1.39	1.21	1.15	1.12
Notes	DTC: Daily Treatment Cost					
Source	Alcántara Information System.					

By active ingredient (ATC5)

The 10 most widely-used active ingredients in terms of number of packs invoiced represent 25% of the total of pharmaceutical packs (Table 5.28).

Omeprazole was the most widely-used active ingredient in 2009; its DDD/1000/day was 84.42, and it has the lowest DTC in its group (€0.14). Within the antiulcerant group, it is considered the drug of choice from the efficiency and clinical experience perspective.

The second most widely-used active ingredient, as measured by DDD/1000/day, is acetylsalicylic acid as a platelet antiaggregant (39.68), while the third is the antihypertensive, angiotensin-convertase inhibitor Enalapril, with a DDD/1000/day of 37.84.

As regards DTC, the highest is that of Atorvastatin (€1.21). This table shows another statin, Simvastatin, which can be considered the drug of choice for the treatment of hypercholesterolemia, with a DTC of €0.25, almost five times lower than that of Atorvastatin.

The lowest DTC of the active ingredients listed in the table is €0.06, which corresponds to Enalapril.

Table 5.28 The ten active ingredients with highest consumption in packs dispensed, 2009.

ACTIVE INGREDIENT ATC5		Number of packs (millions)	Number of DDD (millions)	DDI	Total retail value (millions €)	DTC (€)
A02BC01	Omeprazole	49.48	1.440.31	84.42	195.56	0.14
N02BE01	Paracetamol	35.53	333.24	19.53	101.65	0.31
M01AE01	Ibuprofen	25.22	429.96	25.20	103.89	0.24
B01AC06	Acetylsalicylic acid (Anti-aggregant)	23.64	676.99	39.68	56.96	0.08
C10AA01	Simvastatin	19.06	363.79	21.32	92.03	0.25
A10BA02	Metformin	15.87	337.22	19.76	39.21	0.12
C10AA05	Atorvastatin	15.28	523.62	30.69	633.09	1.21
N05BA06	Lorazepam	14.31	320.31	18.77	30.71	0.10
N02BB02	Metamizole	14.28	52.94	3.10	35.81	0.68
C09AA02	Enalapril	12.88	645.60	37.84	41.71	0.06
Notes	DDD: Defined Daily Dose. DDI: Daily Dose per Inhabitant (DDD/1000 inhabitants/day). DTC: Daily Treatment Cost					
Source	Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).					

For the ten active ingredients selected, Table 5.29 indicates the DDD/1000/day over a five-year period. In all of them it has grown annually.

The DDD/1000/day of both Simvastatin and Atorvastatin have doubled over these five years, Simvastatin going from 10.51 in 2005 to 21.32 in 2009, and Atorvastatin going from 15.67 in 2005 to 30.69 in 2009.

Omeprazole has also shown high growth over this period. The DDD/1000/day of this active ingredient increased from 46.36 in 2005 to 84.42 in 2009.

Table 5.30 shows the DDD/1000/day of the ten most widely-used active ingredients in terms of packs at the national level, by autonomous community. In all of them, Omeprazole is the one with the highest DDD/1000/day, although there is over 78% variation between them (in Andalucía its DDD/1000/day is 111.28 while in Galicia it is 62.41). The order in which other active ingredients are used with respect to the national total differs in each autonomous community. The greatest difference between autonomous communities occurs with Lorazepam, which in Asturias has a DDD/1000/day of 38.63, while in Ceuta it is just 4.34. In the case of Simvastatin there are also major differences between autonomous communities, which show figures as disparate as 27.76 in Cataluña and 6.48 in Melilla. Paracetamol and Metformin show more homogenous use among the different autonomous communities.

Table 5.29 Evolution in the number of DDI of the active ingredients with highest consumption in packs dispensed, 2005-2009.

ACTIVE INGREDIENT ATC5		2005	2006	2007	2008	2009
A02BC01	Omeprazole	46.36	59.96	68.79	77.66	84.42
N02BE01	Paracetamol	14.02	14.54	16.94	18.46	19.53
M01AE01	Ibuprofen	19.25	21.35	23.56	24.20	25.20
B01AC06	Acetylsalicylic acid (anti-aggregant)	30.69	32.89	35.23	37.72	39.68
C10AA01	Simvastatin	10.51	13.35	15.63	18.34	21.32
A10BA02	Metformin	11.25	13.35	15.65	18.23	19.76
C10AA05	Atorvastatin	15.67	18.27	21.92	26.34	30.69
N05BA06	Lorazepam	15.87	16.85	17.64	18.32	18.77
N02BB02	Metamizole	2.57	2.68	2.83	2.96	3.10
C09AA02	Enalapril	31.48	35.13	36.51	37.66	37.84

Notes: DDI: Daily Dose per Inhabitant (DDD/1000 inhabitants/day).

Source: Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).

All together the top ten active ingredients in terms of retail value in 2009 represent over 19% of the total figure for all pharmaceuticals (Table 5.31). Atorvastatin is the active ingredient with the highest retail value, with a large difference over other active ingredients; 633.09 million Euros, almost 5% of the retail value of all pharmaceuticals. Of the active ingredients with highest consumption in terms of total retail value, only two coincide with the ten with highest consumption in terms of packs: Atorvastatin and Omeprazole. The ten active ingredients with highest consumption include two antipsychotics, Olanzapine and Risperidone, which have low DDD/1000/day but very high DTC, at €4.54 and €4.33 respectively.

Table 5.32 presents the evolution in total retail value (over the 2005-2009 period) for the 10 subgroups with highest consumption in terms of the total amount spent on them and Table 5.33 shows how their DTC have evolved over this period.

All the active ingredients saw an increase in their total retail value, except Omeprazole which fell 12% (in 2005 it invoiced 222.71 million Euros while in 2009 the figure was 195.56 million Euros) because the DTC of this active ingredient has fallen

significantly over this period, from €0.30 in 2005 to €0.14 in 2009, a decrease of 55% (Table 5.32 and Table 5.33).

Table 5.30 Number of DDI of the active ingredients with highest consumption in terms of packs dispensed, by autonomous community, 2009.

	Omeprazole	Paracetamol	Ibuprofen	Acetylsalicylic acid (Antiaggregant)	Simvastatin	Metformin	Atorvastatin	Lorazepam	Metamizole sodium	Enalapril
Andalucía	111.28	20.96	30.63	43.23	26.10	23.20	26.68	17.06	4.76	37.90
Aragón	79.08	17.09	27.67	37.80	17.02	17.69	27.38	18.34	2.47	31.12
Asturias	96.40	17.83	26.70	48.58	22.79	18.22	30.78	38.63	2.13	36.20
Baleares	62.42	15.51	16.98	31.23	17.12	16.24	19.19	15.06	2.26	35.66
Canarias	67.18	14.90	17.93	38.93	19.08	21.96	31.57	13.91	2.26	17.31
Cantabria	86.10	16.34	23.72	44.84	19.81	19.08	38.72	11.97	2.34	50.87
Castilla y León	77.38	19.10	23.26	44.04	18.58	17.72	30.70	21.05	3.18	37.71
Castilla-La Mancha	95.42	22.25	27.34	43.46	19.25	19.53	36.24	20.45	5.02	37.74
Cataluña	84.45	22.22	24.98	40.02	27.76	21.03	24.68	18.80	1.41	52.52
C. Valenciana	78.79	20.44	24.94	35.69	16.46	19.45	41.45	16.94	4.01	22.43
Extremadura	94.77	21.99	32.19	46.85	22.41	21.62	41.05	22.16	5.64	34.48
Galicia	62.41	14.96	22.46	46.14	17.79	17.30	42.03	23.19	1.98	28.01
Madrid	78.42	19.36	22.04	33.67	21.90	17.29	26.66	15.42	2.59	50.08
Murcia	75.59	17.84	30.75	36.59	9.14	19.83	36.14	23.55	2.67	16.44
Navarra	77.05	17.46	23.32	37.30	17.42	14.86	32.25	18.08	3.52	46.59
País Vasco	69.17	17.89	21.97	36.25	17.94	19.34	29.38	25.49	2.84	36.73
La Rioja	70.23	17.26	24.80	34.50	11.37	16.12	33.30	12.09	2.34	38.26
Ceuta	71.64	14.04	21.05	19.89	13.56	13.26	19.44	4.34	2.85	23.34
Melilla	65.31	15.12	16.30	23.94	6.48	15.60	14.60	4.51	2.68	27.86
National total	84.42	19.53	25.20	39.68	21.32	19.76	30.69	18.77	3.10	37.84

Notes: DDI: Daily Dose per Inhabitant (DDD/1000 inhabitants/per day).
Source: Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).

The antiepileptic Pregabalin is the active ingredient with the most intense growth over these five years (566%), with a total retail value of 23.22 million Euros in 2005 and 154.73 million Euros in 2009. It should be noted that this active ingredient was added to the SNS funding scheme in 2005, which explains the rapid evolution (Table 5.32). The DTC of this active ingredient has remained very stable over the years analysed; from €3.84 in 2005 it has fallen to €3.78 (Table 5.33).

The antidepressant Escitalopram has also shown high growth in its total retail value, increasing from 62.26 million Euros in 2005 to 161.28 million Euros in 2009, an increment of 159% (Table 5.32), while its DTC over these years has fallen by just 2.87%. This active ingredient has no SNS-financed generic presentation and is not included in the reference price system (Table 5.33).

Table 5.31 The ten active ingredients with highest consumption in terms of retail value, 2009.

ACTIVE INGREDIENT ATC5		Number of packs (millions)	Number of DDD (millions)	DDI	Total retail value (millions €)	DTC (€)
C10AA05	Atorvastatin	15.28	523.62	30.69	633.09	1.21
R03AK06	Salmeterol and other agents for obstructive airway diseases	4.95	148.55	8.71	361.83	2.44
B01AC04	Clopidogrel	4.81	134.80	7.90	2 7.52	2.06
R03AK07	Formoterol and other agents for obstructive airway diseases	3.18	95.52	5.60	197.74	2.07
A02BC01	Omeprazole	49.48	1.440.31	84.42	195.56	0.14
N05AX08	Risperidone	2.02	43.43	2.55	188.15	4.33
R03BB04	Tiotropium bromide	3.52	105.68	6.19	185.86	1.76
N05AH03	Olanzapine	1.36	36.18	2.12	164.29	4.54
N06AB10	Escitalopram	4.86	188.70	11.06	161.28	0.85
N03AX16	Pregabalin	2.50	40.94	2.40	154.73	3.78
Notes	DDD: Defined Daily Dose. DDI: Daily Dose per Inhabitant (DDD/1000/day). DTC: Daily Treatment Cost					
Source	Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).					

Table 5.32 Evolution of total amount spent on active ingredients with highest consumption, 2005-2009. Total retail value (millions of Euros).

ACTIVE INGREDIENT ATC5		2005	2006	2007	2008	2009
C10AA05	Atorvastatin	381.11	417.33	479.40	561.55	633.09
R03AK06	Salmeterol and other agents to combat obstructive airway diseases	289.66	301.02	329.88	348.48	31.83
B01AC04	Clopidogrel	199.36	220.92	243.03	265.39	277.52
R03AK07	Formoterol and other agents to combat obstructive airway diseases	102.71	118.24	140.77	168.03	197.74
A02BC01	Omeprazole	222.71	261.20	233.12	229.47	195.56
N05AX08	Risperidone	168.35	183.26	185.59	192.48	188.15
R03BB04	Tiotropium bromide	114.95	130.25	149.68	169.93	185.86
N05AH03	Olanzapine	142.01	150.97	155.54	162.67	164.29
N06AB10	Escitalopram	62.26	84.99	107.91	135.14	161.28
N03AX16	Pregabalin	23.22	59.07	89.89	126.40	154.73
Source	Alcántara Information System.					

Table 5.33 Evolution of DTC of active ingredients with highest consumption, 2005-2009.

ACTIVE INGREDIENT ATC5		2005	2006	2007	2008	2009
C10AA05	Atorvastatin	1.51	1.40	1.33	1.27	1.21
R03AK06	Salmeterol and other agents for obstructive airway diseases	2.49	2.41	2.41	2.43	2.44
B01AC04	Clopidogrel	2.14	2.07	2.06	2.06	2.06
R03AK07	Formoterol and other agents for obstructive airway diseases	2.22	2.14	2.13	2.10	2.07
A02BC01	Omeprazole	0.30	0.27	0.21	0.18	0.14
N05AX08	Risperidone	4.93	4.85	4.51	4.40	4.33
R03BB04	Tiotropium bromide	1.83	1.77	1.76	1.76	1.76
N05AH03	Olanzapine	4.81	4.66	4.56	4.54	4.54
N06AB10	Escitalopram	0.88	0.86	0.85	0.85	0.85
N03AX16	Pregabalin	3.84	3.75	3.75	3.78	3.78
Notes	DTC: Daily Treatment Cost					
Source	Alcántara Information System.					

Consumption of health products

Health products make up 2% of total consumption in the pharmaceutical benefits scheme in terms of prescriptions and almost 4% in terms of the total amount spent on pharmaceuticals and health products combined.

Table 5.34 shows the health products that experienced greatest growth in terms of consumption of packs in 2009, as a share of the national total. These five groups represent 77.82% of the total retail value of all health products. Urine incontinence pads is the group with the highest number of packs invoiced, 34.20% of the total of health products. Ranked second is dressings, with 19.87%, while gauzes come in third, at 12.03%.

Table 5.35 presents the consumption figures for the five groups of health products with highest consumption in terms of total retail value. These products represent 86.67% of all health products. In relation to total retail value, pads for urine incontinence occupy first place, with a market share of 57.62%, the second group is dressings with 13.41% and in third position are colostomy bags (9.87% of the total).

Table 5.34 Health products. Consumption in terms of packs dispensed, 2009.

Group	Number of packs (millions)	% of 2009 total	% Δ 09/08
Urine incontinence pads	6.23	34.20	5.71
Dressings	3.62	19.87	5.37
Gauzes	2.19	12.03	-2.7
Elastic fabrics for injuries or malformations	1.37	7.51	-3.09
Colostomy bags	0.77	4.21	1.22
TOTAL 5 GROUPS	14.17	77.82	2 95

Source: Alcántara Information System.

Table 5.35 Health products. Consumption in terms of total retail value, 2009.

Group	Total retail value (millions €)	% of 2009 total	% Δ 09/08
Urine incontinence pads	285.30	57.62	2.99
Dressings	66.40	13.41	4.01
Colostomy bags	48.87	9.87	0.78
Ileostomy bags	15.49	3 13	11.79
Catheters	13.07	2.64	8.39
TOTAL 5 GROUPS	429.13	86.67	3.18

Source: Alcántara Information System.

Consumption in terms of the pharmaceutical labs that manufacture the health products and the suppliers

By pharmaceutical lab

In 2009, the number of pharmaceutical labs that invoiced pharmaceuticals to the SNS through medical prescriptions was 410. As for the packs invoiced, five laboratories represent 21.84% of the total and the top 50 labs account for 80.37% of all the pharmaceutical packs. As regards the retail value of these products, the top five laboratories invoice 28.15% of the total retail value in pharmacy and the top 50 labs account for 80.37% of the total (Table 5.36). It is interesting to note that the laboratories

selling the highest number of packs are not necessarily the same as those with the highest figures in terms of total retail value.

Table 5.36 Consumption of pharmaceuticals, by lab. 2009.

	Number of packs invoiced (millions)	% of total	Total retail value (millions €)	% of total
Top 5 laboratories	200.32	21.84 %	3,686.73	28.15 %
Top 10 laboratories	332.11	36.21 %	5,884.74	44.93%
Top 20 laboratories	501.69	54.70 %	8,142.34	62.17
Top 30 laboratories	603.61	65.81	9,555.52	72.96%
Top 40 laboratories	678.46	73.97 %	10,559.05	80.62%
Top 50 laboratories	737.13	80.37 %	11,210.06	85.59%
OVERALL TOTAL (410 laboratories)	**917.23**	**100.00 %**	**13,096.79**	**100.00 %**

Source: Alcántara Information System.

By health product supplier

In 2009, 142 suppliers invoiced health products to the SNS through medical prescriptions. As regards the number of packs invoiced, the top five suppliers represent 46.08% of the total number of packs and the top 25 suppliers account for 90.69% of all packs. In terms of the total retail value of these products, just five suppliers account for 66.85% of the total and 96.27% of the total is invoiced by 25 suppliers (Table 5.37).

Table 5.37 Consumption of health products, by supplier. 2009.

	Number of packs invoiced (millions)	% of total	Total retail value (millions €)	% of total
Top 5 suppliers	8.39	46.08 %	330.98	66.85 %
Top 10 suppliers	12.88	70.71 %	416.01	84.02 %
Top 15 suppliers	14.66	80.48 %	453.63	91.62 %
Top 20 suppliers	15.87	87.10 %	468.48	94.62 %
Top 25 suppliers	16.52	90.69 %	476.63	96.27 %
OVERALL TOTAL (142 suppliers)	**18.21**	**100.00 %**	**495.12**	**100.00 %**

Source: Alcántara Information System.

Consumption by dispensing pharmacy

To facilitate the provision of pharmaceutical services through the legally established dispensing pharmacies, agreements are signed by regional health care authorities and the representatives of the professional associations of pharmacists. The total number of dispensing pharmacies collaborating in the provision of pharmaceutical benefits was 21,153. Andalucía and Cataluña have the highest number of dispensing pharmacies (3563 and 3048 respectively) (Table 5.38).

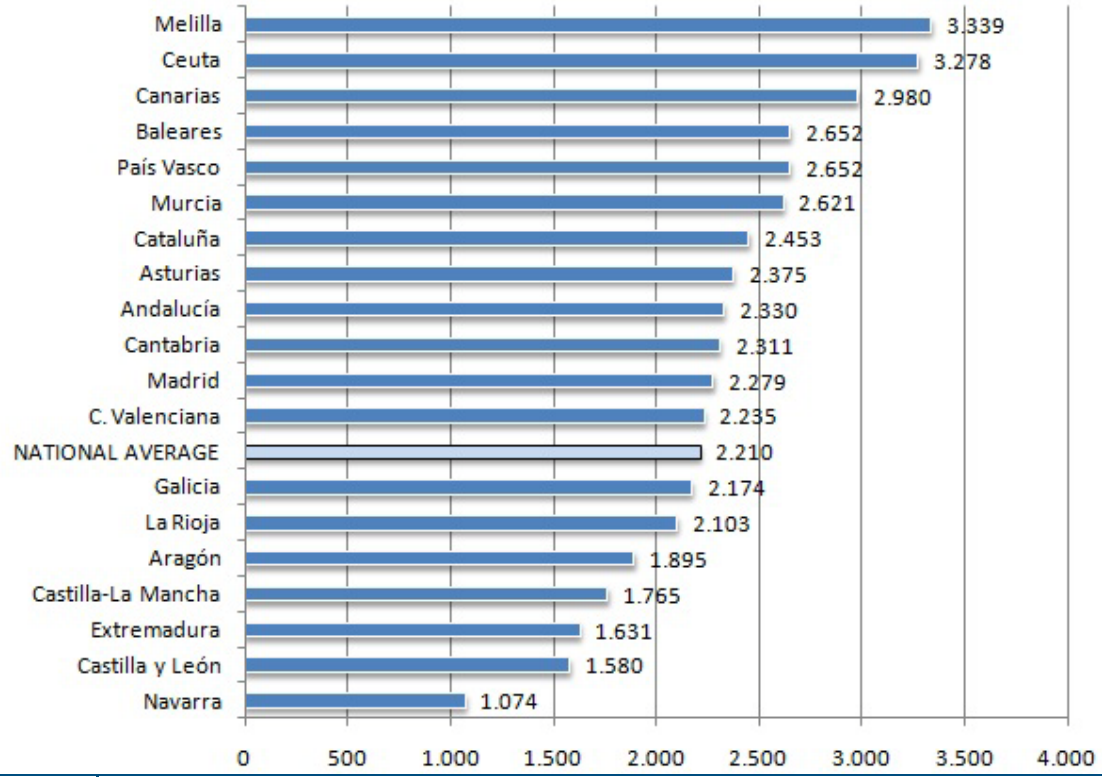
In 2009 the average number of inhabitants per pharmacy was 2210 (based on the national population total). There is considerable variability between autonomous communities, with Melilla, Ceuta and Canarias having the highest number of inhabitants per pharmacy (3339, 3278 and 2980 respectively), and Navarra having the lowest (1074) (Figure 5.12).

Table 5.38 Number of dispensing pharmacies. 2009.

Autonomous Community	Number of pharmacies 2009
Andalucía	3,563
Aragón	710
Asturias	457
Baleares	413
Canarias	706
Cantabria	255
Castilla y León	1,622
Castilla-La Mancha	1,179
Cataluña	3,048
C. Valenciana	2,279
Extremadura	676
Galicia	1,286
Madrid	2,802
Murcia	552
Navarra	587
País Vasco	819
La Rioja	153
Ceuta	24
Melilla	22
NATIONAL TOTAL	**21,153**

Source Alcántara Information System.

Figure 5.12 Average population per dispensing pharmacy. 2009.

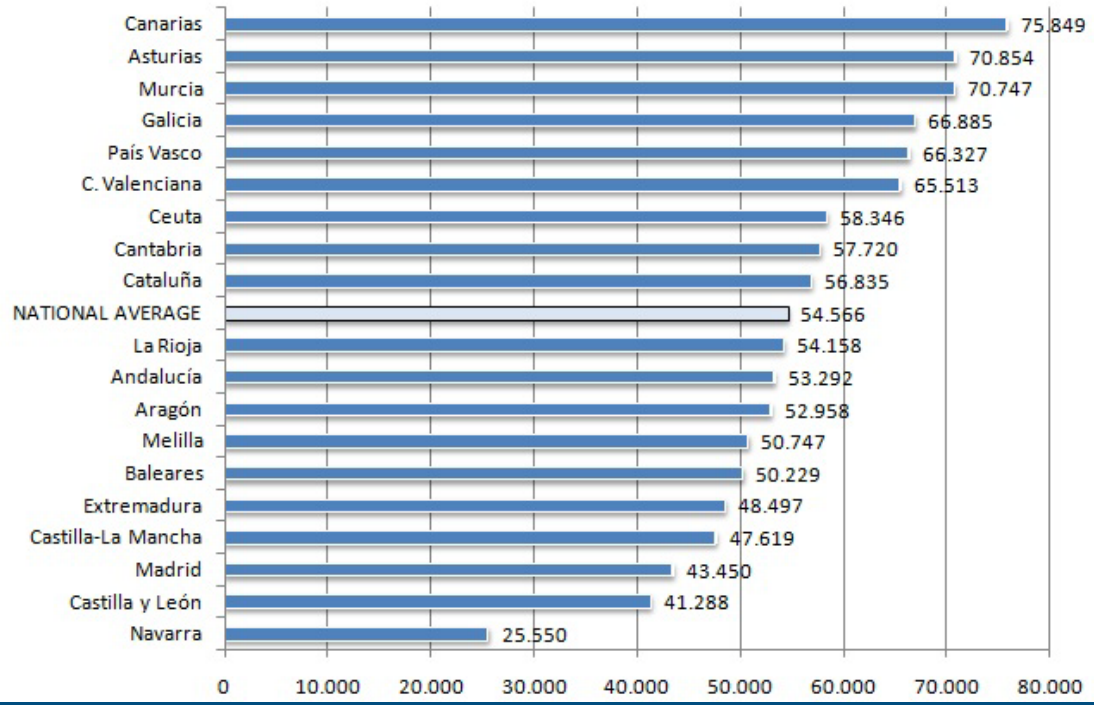


Source Alcántara Information System. Population according to municipal records as of 1 January 2009 (INE).

In 2009 average monthly sales per dispensing pharmacy, linked to the invoicing of SNS medical prescriptions, was 54,566 Euros. Canarias was the autonomous community with

the highest average monthly sales figure (75,849 Euros), while in Navarra the pharmacies invoiced an average of 25,550 Euros (Figure 5.13).

Figure 5.13 **Average monthly sales per dispensing pharmacy. 2009.**



Source Alcántara Information System.

Medicinal and health products financed by the SNS

To be part of the pharmaceutical benefits package, medicinal and health products must be included in the SNS public financing system.

The public financing procedure is regulated by Law 29/2006, on Guarantees and Rational Use of Medicinal and Health Products.[24] Inclusion of a pharmaceutical in the public financing system takes place after it has been authorised by AEMPS or the European Commission. The Ministry of Health, Social Policy and Equality, through the Directorate General for Pharmaceuticals and Health Products, decides whether to include a given medicinal product in the SNS pharmaceutical benefits package, bearing in mind the criteria established for this purpose (seriousness, duration and side effects of the various pathologies for which it is indicated, specific needs of certain groups, therapeutic and social usefulness of the pharmaceutical, rationalisation of public expenditure earkmarked for pharmaceutical benefits, existence of other medicines or therapeutic options for the same disorder, and the degree of innovation shown by the medicine).

As a complementary measure that works in conjunction with the public financing system and is vital for the sustainability of Spain's health system, the prices of medicinal

[24] Ley 29/2006, de garantías y uso racional de los medicamentos y productos sanitarios: [http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-2006-13554]

and health products are subject to control measures. The maximum industrial prices of medicinal and health products to be included in the SNS pharmaceutical benefits package are set by the Interministerial Commission on Pharmaceutical Pricing, part of the Ministry of Health, Social Policy and Equality.

Pharmaceuticals

Situation as of 31 December 2009

Table 5.39 shows in detail the number of pharmaceuticals included in the public financing system as of 31 December 2009; a total of 19,820. Of these, 16,604 correspond to pharmaceuticals in prescription packs and 3,216 to pharmaceuticals in pharmacy packs. The pharmacy packs have a higher number of units than is authorised for public sale and can only be used within authorised institutions.

Of the pharmaceuticals in prescription packs, 14,964 are included on the positive list of products that can be invoiced to the SNS while 1640 correspond to pharmaceuticals for hospital use (these are not invoiced using prescriptions and can only be dispensed in hospital settings or in authorised care centres).

Table 5.39 Pharmaceuticals with SNS financing as of 31 December 2009.

ATC CODE	PRESCRIPTION PACKS		PHARMACY PACKS	TOTAL
	PHARMACEUTICALS ON THE POSITIVE LIST OF PRODUCTS INVOICABLE TO THE SNS	PHARMACEUTICALS FOR HOSPITAL USE		
A	1,629	120	259	2,008
B	1,152	455	562	2,169
C	2,508	53	553	3,114
D	558	6	24	588
G	433	12	11	456
H	226	47	54	327
J	2,320	359	865	3,544
L	463	236	53	752
M	747	76	131	954
N	3,659	134	575	4,368
P	37	5	2	44
R	635	6	50	691
S	228	5	1	234
V	369	126	76	571
SUBTOTAL	14,964	1,640	3,216	19,820
TOTAL		16,604		

Notes

ATC classification by anatomical groups:

A Alimentary tract and metabolism
B Blood and blood-forming organs
C Cardiovascular system
D Dermatological agents
G Genito-urinary system and sex hormones
H Systemic hormonal preparations, excluding sex hormones and insulins
J Antiinfectives for systemic use
L Antineoplastic agents and immunomodulating agents
M Musculoskeletal system
N Nervous system
P Antiparasitic products, insecticides and repellents
R Respiratory system
S Sensory organs
V Various

Notes: As of 31 December 2009

Source: Alcántara Information System.

According to the Anatomical Therapeutic Chemical Classification System (ATC), code N (Nervous system) has the highest number of publicly financed pharmaceuticals (4368), followed by code J (Anti-infectives for systemic use) (3544) and code C (Cardiovascular system) (3114). On the other hand, code P (Antiparasitic products, insecticides and repellents) has the lowest number of publicly financed products (44).

Of all the pharmaceuticals financed by the SNS, 8100 correspond to generic medicines, which thus constitute 40.86% of the total. The proportion of generics is somewhat higher in pharmacy pack medicines than in prescription packs, 43.56% as opposed to 40.34% (Table 5.40).

Table 5.40 Pharmaceuticals (generics and non-generics) financed by the SNS as of 31 December 2009.

	GENERIC PHARMACEUTICALS	NON-GENERIC PHARMACEUTICALS	TOTAL	% GENERICS/TOTAL
PRESCRIPTION PACKS	6,699	9,905	16,604	40.34
PHARMACY PACKS	1,401	1,815	3,216	43.56
TOTAL	8,100	11,720	19,820	40.86

Notes: As of 31 December 2009

Source: Alcántara Information System.

Every month the Directorate General for Pharmaceuticals and Health Products creates a file with the latest information on the pharmaceuticals and health products that are financed in prescription packs and form part of the pharmaceutical benefits package. These are the only ones that can be prescribed through SNS medical prescriptions. This file is known as the "*Nomenclátor de productos farmacéuticos facturables*" (Positive list of pharmaceutical products invoiced to the SNS) and it is distributed to the autonomous communities for use in the invoicing of SNS medical prescriptions presented by the Professional Associations of Pharmacists.

Table 5.41 shows the number of pharmaceuticals financed by the SNS and on the positive list as of 31 December 2009, as well as their average price. Depending on the type of contribution that users must make towards the payment of these pharmaceuticals, distinction is made between those that have normal co-payments and those that have reduced co-payments.

Code N (Nervous system) has the highest number of pharmaceuticals on the positive list, 3659, which amounts to 24% of the total. The next group is C (Cardiovascular system) with 2508 pharmaceuticals, or 17% of the total. Of all the pharmaceuticals (14,964), 8968 of them fall into the category of normal co-payment and 5996 (about 40% of the total) fall into the category of reduced co-payment. All of the pharmaceuticals in code L (Antineoplastic agents and immunomodulating agents) are in the reduced co-payment category. The pharmaceuticals in code N (Nervous system) are those with the highest number of pharmaceuticals financed with reduced co-payment (2699 pharmaceuticals).

The average price of the pharmaceuticals on the positive list is 27.90 Euros. The ones in code L (Antineoplastic and immunomodulating agents) and in code H (Systemic hormonal preparations, excluding sex hormones and insulins) have the highest average prices, while those in code S (Sensory organs) and M (Musculoskeletal system) have the lowest average prices.

Table 5.41 Pharmaceuticals on the positive list as of 31 December 2009.

ATC CODE	Pharmaceuticals with normal co-payment	Pharmaceuticals with reduced co-payment	Total pharmaceuticals	Average price (€)
A	1,166	463	1,629	14.98
B	985	167	1,152	18.70
C	91	1,590	2,508	12.18
D	528	30	558	11.65
G	262	171	433	36.10
H	120	106	226	104.88
J	2,293	27	2,320	11.81
L		463	463	267.46
M	721	26	747	8.13
N	960	2,699	3,659	28.01
P	30	7	37	19.99
R	446	189	635	14.10
S	228		228	4.84
V	311	58	369	66.73
TOTAL	8,968	5,996	14,964	27.90

Notes: The ATC groups are cited in **Table 5.39**.
As of 31 December 2009

Source: Alcántara Information System.

Pharmaceuticals added to the SNS public financing system in 2009

In 2009 (Table 5.42), a total of 1618 presentations of pharmaceuticals were added to the SNS public financing system. Of them 142 correspond to presentations in pharmacy packs and 1476 to prescription packs. Of the latter, 201 are for hospital use and 1275 were included in the positive list of products that can be invoiced to the SNS. The therapeutic groups with the highest number of new additions are code N (Nervous system) with 549 presentations, code C (Cardiovascular system) with 302 presentations and code A (Alimentary tract and metabolism) with 208.

Table 5.43 shows the breakdown of the generic and non-generic medicines included in SNS financing in 2009. Of the total of 1618 presentations, 73.36% were generic medicines; for pharmacy packs the percentage is somewhat higher than for prescription packs (78.16% and 72.89%, respectively). The number of generic pharmaceuticals included in the public financing system is growing every year; as indicated in Table 5.40, the generics financed as of 31 December 2009 amount to 40.86% of the total and of the pharmaceuticals added to the financing system over the course of 2009, the percentage of generics was 73.36%

The number of presentations of pharmaceuticals (Table 5.44) that were added to the positive list of products that can be invoiced to the SNS through official medical prescriptions is 1275, of which 755 were pharmaceuticals with reduced co-payment. The average retail price, with VAT, of the new pharmaceuticals included in 2009 was €42.92, which is 4% less than the average price of the pharmaceuticals added in 2008. The prices vary greatly depending on the therapeutic group to which they belong; those belonging to code L (Antineoplastic and immunomodulating agents) are costly and all have reduced co-payment, while code S (Sensory organs) is the group with the lowest average price.

Table 5.42 Pharmaceuticals added to the SNS public financing system in 2009

ATC CODE	PRESCRIPTION PACKS		PHARMACY PACKS	TOTAL
	PHARMACEUTICALS ON THE POSITIVE LIST OF PRODUCTS INVOICED TO THE SNS	PHARMACEUTICALS FOR HOSPITAL USE		
A	161	27	20	208
B	40	30	13	83
C	270	3	29	302
D	17			17
G	15			15
H	23	1	8	32
J	85	26	22	133
L	44	56	5	105
M	49	15	12	76
N	524	2	23	549
P	1			1
R	22		2	24
S	17			17
V	7	41	8	56
SUBTOTAL	1,275	201	142	1.618
TOTAL		1,476		

Notes: The ATC groups are cited in **Table 5.39**.
Source: Alcántara Information System.

Table 5.43 Pharmaceuticals (generic and non-generic) added to the SNS public financing system in 2009.

	GENERIC PHARMACEUTICALS	NON-GENERIC PHARMACEUTICALS	TOTAL	% GENERICS/ TOTAL
PRESCRIPTION PACKS	1,076	400	1,476	72.89
PHARMACY PACKS	111	31	142	78.16
TOTAL	1,187	431	1,618	73.36

Source: Alcántara Information System.

Table 5.44 Pharmaceuticals added to the positive list of pharmaceutical products in 2009.

ATC CODE	Pharmaceuticals with normal co-payment	Pharmaceuticals with reduced co-payment	Pharmaceuticals total	Average price
A	96	65	161	19.11
B	28	12	40	64.63
C	134	136	270	16.89
D	15	2	17	16.22
G	14	1	15	62.42
H	15	8	23	57.52
J	83	2	85	25.35
L		44	44	303.6
M	46	3	49	9.47
N	64	460	524	44.93
P		1	1	14.14
R	6	16	22	50.48
S	17		17	6.66
V	2	5	7	173.17
TOTAL	520	55	1,275	42.92

Notes: The ATC groups are cited in **Table 5.39**.
Source: Alcántara Information System.

Active ingredients added for the first time to the SNS financing system in 2009

Table 5.45 lists the active ingredients that have been included for the first time in the SNS system over the course of 2009. There were a total of 25 new active ingredients in 39 different presentations. Some of these active ingredients received marketing authorisation in 2008, but their official inclusion in the SNS financing system took place in 2009. Code B has the highest number of new active ingredients, with 6 new additions to the financing system.

According to their dispensing conditions, 18 of the 39 presentations are subject to restricted medical prescription. Fifteen of these 18 have the qualification 'hospital use' (they can only be used in hospital settings or other authorised care centres), 2 are for hospital diagnostics (prescribed only by certain specialist doctors) and 1 is subject to singular reservations in its prescribing and dispensing conditions, and requires special approval.

Table 5.45 Active ingredients added for the first time to the SNS financing system in 2009.

ATC	ACTIVE INGREDIENT	NUMBER OF PRESENTATIONS	ACTION/EFFECT	DISPENSING CONDITIONS
A	Sapropterin	1	Synthetic enzyme of phenylalanine hydroxylase	Hospital use
B	Cilostazol	2	Platelet inhibitor	Medical prescription
	Iron carboxymaltose	1	Antianemic agent	Hospital use
	C1 esterase inhibitor	1	Antifibrinolytic agent (proteinase inhibitor)	Hospital use
	Prasugrel	1	Platelet inhibitor	Medical prescription
	Rivaroxaban	3	Antithrombotic agent	Medical prescription
	Romiplostim	2	Haemostatic agent	Hospital use
C	Ambrisentan	2	Antihypertensive agent	Hospital use
	Icatibant	1	Hypolipidemic agent	Hospital use
	Niacin Laropiprant	2	Hypolipidemic agent	Medical prescription
	Ranolazine	3	Antianginous agent	Medical prescription
	Rosuvastatin	4	HMG CoA reductase inhibitors	Medical prescription
H	Histrelin acetate	1	Gonadotropin inhibitor	Hospital diagnostics
J	Doripenem	1	Antibacterial agent	Hospital use
	Etravirin	1	Antiretroviral (reverse transcriptase inhibitor)	Hospital use
	Pneumococcal capsular antigen	1	Antipneumococcal vaccine	Medical prescription Differentiated form
L	Azacitidine	1	Antimetabolic antineoplastic agent	Hospital use
	Tocilizumab	2	Interleukin inhibitor	Hospital use
	Ustekinumab	1	Interleukin inhibitor	Hospital diagnostics
N	Agomelatine	2	Antidepressant	Medical prescription
	Tetrabenazine	1	Catecholamine inhibitor	Medical prescription
R	Ciclesonide	1	Antiasthmatic	Medical prescription
S	Tafluprost	1	Antiglaucoma	Medical prescription
V	Naltrexone methylbromide	1	μ receptor antagonist	Medical prescription
	Sugammadex	2	Antidotes	Hospital use

Notes The ATC groups are cited in **Table 5.39**.
Source Alcántara Information System.

Health products

Situation as of 31 December 2009

The total number of health products financed by the SNS as of 31 December 2009 was 5206. According to the groups established by Royal Decree 9/1996, which regulates the selection of effects and accessories, their financing and their supply and dispensation scheme, the highest number of products is found in the elastic fabrics group. This group is used to protect against or reduce injuries and internal malformations, and has a total of 1589 products. It is followed by colostomy bags (491) and urine incontinence pads (465). By type of co-payment, 3229 of the products require normal co-payment and 1977 have reduced co-payment (38% of the total). The average price of all the health products included in the public financing system is €27.02. The highest average prices correspond to urostomy and ileostomy bags (€80.35 and €80.06, respectively) and the lowest averages are found in bandages and cotton wool products (€1.45 €2.37 respectively). Over the course of 2009, only one new product was added to the SNS financing system; a sterile dressing (Table 5.46).

Table 5.46 Health products financed by the SNS as of 31 December 2009.

GROUP	USER CONTRIBUTION		TOTAL	AVERAGE PRICE (€)
	NORMAL	REDUCED		
Cotton wool products	183		183	2.37
Dressings	284		284	15.70
Gauzes	114		114	2.64
Bandages	308		308	1.45
Plasters	125		125	2.49
Cannula		124	124	50.00
Catheters		375	375	32.68
Vaginal douches, irrigators and accessories	7		7	3.16
Eye patches	19		19	3.96
Elastic fabrics for injuries or malformations	1,589		1,589	7.62
Trusses and suspensory bandages	129		129	10.84
Inhalation devices		8	8	6.20
Urine collection bags		103	103	10.60
Urine collector for incontinence in men, accessories		121	121	46.30
Urine incontinence pads	465		465	38.29
Other devices for incontinence	6		6	18.41
Colostomy bags		491	491	61.10
Ileostomy bags		409	409	80.06
Urostomy bags		134	134	80.35
Ostomy accessories		17	17	5.16
Ostomy dressings		173	173	20.84
Ostomy irrigation systems and accessories		14	14	32.98
Continent colostomy devices		8	8	37.65
Total	3,229	1,977	5,206	27.02

Source Alcántara Information System.

5.5 Prescription by active ingredient and dispensation through e-prescribing

Prescription by active ingredient

The International Nonproprietary Names (INN) nomenclature system was created by the WHO in 1953 to facilitate international identification of the active ingredients in medicines and the pronunciation of their names. The Official Spanish Name (Denominación Oficial Española, DOE) is determined by the AEMPS and consists of a linguistic adaptation of the INN of each substance. This name is the true name of the pharmaceutical: the active ingredient.

The WHO recommends that prescriptions specify the active ingredient instead of a brand name, because this allows for universal identification of the pharmaceuticals (in all scientific publications and medical schools these substances are identified by active ingredient) and helps prevent mistakes arising from the confusion of medicines with similar brand names and it eliminates the need to memorize *"fantasy"* names without therapeutic meaning.

Article 85 of the Law on Guarantees and Rational Use of Medicinal and Health Products[25] states that *"the health authorities shall promote the identification of pharmaceuticals by active ingredient in medical prescriptions"* and that *"the pharmacist shall dispense the pharmaceutical with the lowest price and if the prices are the same, the generic substance if there is one."*

Prescription by active ingredient results in a more rational use of health care resources, as dispensing the pharmaceutical with the lowest-price reduces pharmaceutical expenditure.

Table 5.47 presents the indicators related to prescription by active ingredient in the autonomous communities, for the years 2008 and 2009.

In 2009, great efforts were made by the autonomous communities to promote prescription by active ingredient, and as a result the proportion of packs dispensed through this type of prescribing method and also their total retail value have increased over the preceding year.

Andalucía is the autonomous community with the highest rates of prescription by active ingredient, followed by Cantabria, Castilla y León and Cataluña.

[25] Ley de garantías y uso racional de los medicamentos y productos sanitarios [http://www.aemps.es/actividad/legislacion/espana/docs/rcl_2006_1483.pdf]

Table 5.47 Prescription by active ingredient in the autonomous communities. 2008-2009.

	% PACKS DISPENSED WITH PRESCRIPTION BY ACTIVE INGREDIENT/TOTAL		% RETAIL VALUE OF PACKS PRESCRIBED BY ACTIVE INGREDIENT/TOTAL	
	2009	2008	2009	2008
Andalucía	79.24	77.12	71.11	76.37
Aragón	16.00	14.70	5.14	5.15
Asturias	NDA	NDA	NDA	NDA
Baleares	16.88	5.58	12.14	4.15
Canarias	16.70	14.09	8.15	7.34
Cantabria	39.01	30.77	23.78	18.71
Castilla y León	29.21	26.28	16.67	14.97
Castilla-La Mancha	19.78	15.47	8.71	6.92
Cataluña	28.54	25.94	11.76	11.38
C. Valenciana	8.11	6.44	3.2	2.56
Extremadura	10.56	11.14	3.97	4.64
Galicia	NDA	NDA	NDA	NDA
Madrid	NDA	NDA	NDA	NDA
Murcia	10.08	8.52	4.12	3.67
Navarra	6.26	5.78	2.80	NDA
País Vasco	NDA	NDA	NDA	NDA
Rioja	8.53	NDA	2.95	NDA
INGESA	S/D	S/D	S/D	S/D

Notes: NDA: No Data Available. The autonomous community does not have these figures.
Source: Information provided by the autonomous communities for this report.

Dispensation through e-prescribing

E-prescribing is an electronic means of performing all the procedures necessary to provide pharmaceutical services to patients and users (prescription, authorisation, dispensation). The electronic prescription system connects the doctor with the dispensing pharmacy and the pharmacy with the payer of the benefit.

Table 5.48 shows the indicators, broken down by autonomous community, related to the volume of dispensation through the electronic prescription system and also to the total retail value of these pharmaceuticals, in 2008 and 2009.

The autonomous communities are making great efforts to introduce and extend e-prescribing. In 2009 those with the highest degree of implementation were Andalucía, Baleares and Extremadura. Canarias, Comunidad Valenciana and Cataluña are currently in the process of extending e-prescribing. The remaining autonomous communities are in early phases of the e-prescription project.

Legislation concerning electronic prescription enacted by the autonomous communities, within the sphere of their responsibilities, is as follows:

— ANDALUCÍA. *Decreto 181/2007, de 19 de junio, por el que se regula la receta médica electrónica.*
— CATALUÑA:
  - *Decreto 159/2007, de 24 de julio, por el que se regula la receta electrónica y la tramitación telemática de la prestación farmacéutica del Servicio Catalán de la Salud.*

- *Decreto 159/2007, de 24 de julio, por el que se regula la receta electrónica y la tramitación telemática de la prestación farmacéutica del Servicio Catalán de la Salud.*

— GALICIA. *Decreto 206/2008, de 28 de agosto, de receta electrónica.*

— MURCIA. *Decreto nº 26/2009, de 27 de febrero, por el que se modifica el decreto 92/2005, de 22 de julio, por el que se regula la tarjeta sanitaria individual y su régimen de uso en la Región de Murcia.*

EXTREMADURA. *Decreto 93/2009, de 24 de abril, por el que se regula la implantación de la receta electrónica en el ámbito del Sistema Sanitario Público de Extremadura.*

Table 5.48 Dispensation and total retail value of pharmaceuticals prescribed through the electronic prescription system, by autonomous community. 2008-2009.

Autonomous Community	% Packs dispensed through the e-prescription system		% total retail value of products dispensed through the e-prescription system	
	2009	2008	2009	2008
Andalucía	54.96	45.87	56.24	48.12
Aragón	0.19	0.08	0.22	0.08
Asturias	-	-	-	-
Baleares	40.85	11.10	41.18	11.50
Canarias	19.17	2.99	18.09	2.76
Cantabria	0.055	-	0.061	-
Castilla y León	0.38	-	0.41	-
Castilla-La Mancha	0.00026	-	0.00031	-
Cataluña	1.76	2.68	20.42	2.62
C. Valenciana	8.39	1.52	9.76	1.11
Extremadura	39.94	1.11	42.93	1.29
Galicia	0.88	-	0.31	-
Madrid	-	-	-	-
Murcia	0.00	0.00	0.00	0.00
Navarra	-	-	-	-
País Vasco	-	-	-	-
Rioja	-	-	-	-
INGESA	-	-	-	-

Notes: (-) No data available.
Source: Information provided by the autonomous communities for this report.

5.6 Pharmaceutical services in social care centres

Social health care comprises the set of care activities aimed at patients (often chronically ill patients) whose special characteristics mean that they can benefit from simultaneous and synergistic action by both health care services and social services, so as to increase such patients' autonomy, palliate their limitations or suffering and facilitate their reinsertion into society.[26]

The special characteristics of social care centres result in there being various ways to provide pharmaceutical services within the SNS. They can be provided through medical prescription and dispensing pharmacies; through pharmacy services at the primary or specialised care level; through social health care pharmacy services; through medicine

[26] As defined by the Law on Cohesion and Quality in the SNS [http://www.msps.es/organizacion/sns/planCalidadSNS/pdf/transparencia/LEY_COHESION_Y_CALIDAD.pdf]

depots that depend on a pharmacy service and by agreements with social health care pharmacy services.

The way of supplying pharmaceuticals in these centres has traditionally been the medical prescription issued by the primary care physician, with dispensation at the pharmacy. This procedure is still used in various autonomous communities, especially for smaller institutions. However, the natural evolution of this procedure has been to instead give the physicians at the social care centres responsibility for prescribing pharmaceuticals. In some regions, such as País Vasco, the prescriptions are differentiated from the rest and the dispensing pharmacies apply special economic conditions to them, with a discount that benefits the Department of Health and Consumer Affairs.

Various autonomous communities supply pharmaceuticals to the social care centres through pharmacy services, of both hospitals and primary care services. In some cases dispensation even takes place in single doses (for example, in Galicia). Also relatively frequent are pharmacy depots that depend on hospital pharmacy services. In Comunidad Valenciana there are five social health care pharmacy services that supply pharmaceuticals to 51 depots. It is worth mentioning the case of Navarra, where most centres with more than 100 beds, regardless of which sector it belongs to, have their own pharmacy service and have agreements with the regional health services for the provision of pharmaceutical benefits to the centre's residents.

Health products such as urine incontinence pads, test strips and dressing supplies, tend to be supplied directly by the regional health services or by primary care pharmacy services.

Table 5.49 shows the different models of pharmaceutical benefit provision that the autonomous communities give to the various public, and/or private social care centres

Table 5.49 Pharmaceutical benefits in social health care centres in the autonomous communities. 2009.

Autonomous Community	HOW BENEFITS ARE PROVIDED	NOTES
Andalucía	Pharmaceuticals and health products are obtained through official SNS prescriptions	Exception: in the primary care districts of Málaga and Aljarafe (Sevilla): direct acquisition of urine incontinence pads for social health care centres
Aragón	Since last quarter of 2009: in all public social health care centres pharmaceutical care and centralised supply of pharmaceuticals and health products take place through the hospital pharmacy services	In 2002, the new model began in nine social health care centres that belong to the regional government, through a programme for centralised purchase of certain active ingredients by the pharmacy services at provincial hospitals
Asturias	Through medical prescription by primary care physicians or, in large public residential centres, by the physicians there	
Baleares	Public centres run by the regional government: purchase, storage and dispensation of pharmaceuticals takes place through the hospital pharmacy services	Urine incontinence pads both at public and private centres are purchased through a public bidding process. They are supplied directly by the adjudicated company to all the social health care centres that wish to receive them, on a monthly basis, according to the order made
	Private centres: pharmaceutical benefits are provided through official prescriptions written by the primary care physician and dispensed at pharmacies	
Canarias	The regional health service participates in the social health care programme through: - the Plan for social health care infrastructure for elderly	The Regional Dependence Plan is an institutional system that co-ordinates the provision of

	people (*Plan Canario de Atención a Mayores Dependientes*, or PCAMD). This plan is for people over the age of 65 with limited capabilities or a high degree of dependence. It covers residential and day centre resources - Social health care programme for the disabled (*Plan de Atención a la Discapacidad*, or PAD). This programme is for people aged 17-64 who experience difficulties with their personal autonomy, or have Alzheimer's or other forms of dementia. It covers residential and day centre resources, assisted living facilities and rehabilitation centres. Its purpose is to finance the health and pharmaceutical benefits of the people living in residences	services, management and co-financing through specific agreements signed by all agents involved
Cantabria	The 59 social health care centres (public, private or private with government contracts) are assigned to primary care physicians, the prescribing of pharmaceuticals and health products takes place through official prescriptions and dispensation is through any pharmacy in Cantabria. Urine incontinence pads are supplied directly to the centres, following individualised request by the primary care physician. Reactive strips, dressing materials and pharmaceuticals for emergency situations are provided directly by the primary care pharmacy service	The information system about prescription in social health care centres (which is part of the information system about pharmaceutical prescription) disaggregates data down to the level of prescribing doctor and active ingredient. The system enables data exploitation of quantitative, qualitative and quality indicators
Castilla y León	In 2002 a pilot test began in two public residences in Valladolid. Pharmacy depots linked to the Pharmacy Service of the Hospital Universitario Río Hortega were authorised and a pharmacist specialised in hospital pharmacy was hired. The public residences have been added gradually. Now there are 12 pharmacy depots attended by pharmacists linked to the pharmacy services of the reference hospitals. The programme has been effectively extended to all the provinces of Castilla y León, except Salamanca, where it is still in the initial stages	The programme currently consists of 11 centres with 2287 residents who are attended by 9 specialised pharmacists The programme generated a savings of more than 1.5 million euros in direct acquisition costs, although the costs of the new pharmacy personnel must be deducted from this amount
Castilla-La Mancha	Since 2006, in 20 public residences pharmaceuticals are supplied directly by the pharmacy services of the reference hospitals. In the remaining centres the pharmaceuticals are acquired through official prescriptions and dispensed by the pharmacies	
Cataluña	Pharmaceutical benefits in social health care centres are authorised by the Catalan Department of Health and contracts are made through CatSalut, the Catalan Health Service, through pharmacy services and pharmaceutical depots	
Comunidad Valenciana	Public social health care centres: pharmaceuticals are supplied to centres through the social health care pharmacy services, by means of the programme SUMED, which links either a pharmacy service or a pharmacy depot to each centre, to meet the needs of the residents entitled to pharmaceutical benefits. In public social health care centres with neither pharmacy service nor pharmacy depot, supply is through prescription and dispensation using the official prescription written by the primary care physician, or through prescription by physicians hired by the centre and authorised to use SNS prescriptions.	Begun in 1990 in conjunction with the Regional Ministries of Social Welfare and Health. All public social health care centres are now included in SUMED, either through a pharmacy service or a pharmacy depot.
	Health products are supplied to social health care centres (private, public or private with government contract) through the programme SUPRO, for residents entitled to pharmaceutical benefits	Funding comes from the Regional Department of Health and products are supplied through this department's central purchasing division.

	Private social health care centres: pharmaceuticals are supplied through official medical prescriptions. The prescription can be written by the primary care physician assigned to the centre or by the physician hired by the centre and authorised to use official SNS prescriptions. Health products are supplied through the programme SUPRO. Items are distributed directly from the supplying labs to private social health care centres, with the intervention of the Regional Department of Health's Pharmaceutical Care and Supply Services. They can also be supplied through medical prescription but only by the primary care physician assigned to the centre	The request for authorisation by private social health care centres is voluntary. Centres participate on a voluntary basis.
Extremadura	In social health care centres with 100+ beds pharmaceutical benefits are provided through the pharmacy services linked to the primary or specialised care services. The pharmacist visits the social health care centre to monitor and suggest improvements for the medical prescriptions	
	In social health care centres with fewer than 100 beds SNS prescriptions are used. The pharmacist from the health centre visits the centre to monitor the pharmacotherapy and co-ordinate health care tasks with the physicians and nurses	
Galicia	Pharmaceutical services are provided by the pharmacy service of the social health care centre's reference hospital, under the responsibility of the pharmacists specialised in hospital pharmacy. The benefits include: pharmaceuticals in the hospital's pharmacotherapeutic guide, dietary products for enteral nutrition, health products through SNS prescriptions, equipment used in intravenous administration of medicine and in enteral nutrition, material for the extraction and collection of samples and also the forms and material needed to request pharmaceuticals and the prescription of unitary doses Dispensation is by single doses, medical prescriptions are authorised by the pharmacist in the same computer application as the one used for hospitalised patients	Law 5/1999, of 21 May 1999, makes it obligatory to have a pharmacy service at social health care centres with 50+ beds, under the responsibility of a pharmacist specialised in hospital pharmacy. This legal framework provides the basis for agreements between geriatric centres and the regional health service
Madrid	Pharmaceutical services are provided in the dispensing pharmacies as determined in applicable work protocols. A customised dosage system is established The pharmacist informs residence staff about the pharmaceutical and co-ordinates with the team of care-givers. Dispensation takes place, except where otherwise authorised, by the dispensing pharmacies in the same basic zone, provided they meet programme requirements	Agreements with dispensing pharmacies
Murcia	In 2007 a pilot project was undertaken in a public social health care centre. A pharmacy depot linked to the reference hospital was created and attended by a hospital pharmacist.	The experiment significantly improved the pharmaceutical care provided and brought about considerable savings, more than 50% as compared to the preceding situation
	Law 3/1997, of 28 May 1997, on pharmaceutical regulations in Murcia, makes it obligatory (Art. 36) to establish a pharmacy service in social health care and psychiatric centres. This legislation has yet to be implemented. In the meantime, pharmaceutical benefits are provided through SNS prescriptions and dispensing pharmacies.	The exception is urine incontinence pads which are supplied through the health area management structures of the Regional Health Service
Navarra	In most social health care centres with 100+ beds there are pharmacy services that sign agreements with the regional health services	This leads to improved use of pharmaceuticals in institutionalised patients and it allows for more rational expenditure on pharmaceutical benefits

La Rioja	Pharmaceutical benefits in social health care centres are provided through dispensing pharmacies, either directly or by association with an authorised pharmacy depot in the centre itself	Law 5/2008 includes a modification of Law 8/1998, of 16 June 1998, on pharmaceutical regulations in La Rioja, an makes it obligatory for social health care centres to have pharmacy depots
País Vasco	Benefits provided by dispensing pharmacies through SNS medical prescriptions differentiated from the rest	Agreement in 2008 between the Regional Department of Health and Consumer Affairs and the Professional Association of Pharmacists. It establishes certain economic conditions for the pharmaceuticals dispensed in these centres, with discounts that benefit the Department of Health and Consumer Affairs
INGESA	Pharmaceutical benefits for outpatients and institutionalised patients through official SNS prescriptions, which are dispensed in pharmacies. Social health care centres have a supply of the most frequently used pharmaceuticals, which are replaced by the pharmacy unit attached to the primary care service. The dispensation of health products, to outpatients with an assigned social health care centre, is through SNS medical prescription. Health products such as: urine incontinence pads, dressing material and reactive strips are dispensed directly at social health care centres, following public calls for bids issued by INGESA through which purchase contracts are awarded	
Source	Information provided by the autonomous communities for this report.	

5.7 Other activities related to pharmaceutical benefits in the autonomous communities

In most autonomous communities, urine incontinence pads are supplied to institutionalised patients by the regional health services, which make calls for bids from companies hoping to be awarded the purchase agreement. For those patients who live at home the system used is a prescription with special approval, dispensed in pharmacies. In Baleares and Navarra, however, centralised calls for bids are used to choose the suppliers for both groups.

In the case of test strips most autonomous communities award the contract to the successful bidder and distribution takes place in health centres, although medical prescriptions and dispensation in pharmacies continue to exist in some autonomous communities.

Table 5.50 shows the various procedures and management methods used in the acquisition and distribution of test strips for determining blood sugar levels, pads for urine incontinence and other health products.

Table 5.50 **Acquisition and distribution of pads, reactive strips and other health products in the autonomous communities. 2009.**

--	Pads		Reactive strips		Other products		Notes
	Acquisition	Distribution	Acquisition	Distribution	Acquisition	Distribution	
Andalucía	Official prescription	Dispensing pharmacy	Official prescription	Dispensing pharmacy			Direct acquisition in the primary care districts of Málaga and Aljarafe (Sevilla)
Aragón	Institutionalised patients: centralised purchase by the Regional Health Service	Regional Health Service	Centralised purchase after bidding process	Health centres			Hospital pharmaceuticals: purchase after bidding process, by therapeutic group and by active ingredient
	Patients at home: prescription with special approval	Dispensing pharmacy					
Asturias	Patients at home: official prescription	Dispensing pharmacy	Centralised purchase after bidding process	Nursing staff at health centres	Centralised purchase: dressings for institutionalised patients		All other items and accessories and diet therapy products: through official prescription
	Patients at social health care centre: centralised purchase	Centralised purchase after bidding process					
Baleares	Centralised purchase following negotiation	Management structures	Centralised purchase following negotiation	Management structures			In 2010, urine incontinence pads: adjudication to a single supplier per batch, with compliance of technical requisites and lowest price
Canarias	Prescription with special approval	Dispensing pharmacy	Official prescription	Dispensing pharmacy			
Cantabria			Centralised purchase after bidding process by GAP	Nursing staff at health centres	Growth hormone by primary care pharmacy services	Paediatrician and nurse at health centre	
Castilla y León	Institutionalised patients: centralised purchase by Regional Health Service management	Primary care management structures	Centralised purchase after bidding process	Nursing staff at health centres			Urine incontinence pads, in patients with disability over 33% and children over 5 who are not institutionalised, reduced co-payment
	Patients at home: prescription with special approval						
Castilla-La Mancha	Institutionalised patients: centralised purchase by GAP	from GAP to social health care centres	Centralised purchase by GAP	Health centres			

	Patients at home: official prescription	Dispensing pharmacy					
Cataluña	Official prescription	Dispensing pharmacy	CatSalut providers	CatSalut providers			
Comunidad Valenciana	Official prescription	Dispensing pharmacy	Official prescription	Dispensing pharmacy			Maximum financing prices are set by Collective Agreement (9 March 2009) between Regional Health Agency and Official Professional Associations of Pharmacists
	According to the health product supply programme (Supro). Includes all patients at social health care centres (public, private and private with government contract) who are entitled to pharmaceutical benefits	Through the central purchase division of the Regional Department of Health					
Extremadura	Institutionalised patients: centralised purchase after bidding process	Pharmacists of the health area: control and monitoring	Centralised purchase: after bidding process	Nursing staff at health centres			
	Other patients: prescription with special approval	Dispensing pharmacy					
Galicia	Centralised purchase after bidding process for institutionalised and hospitalised patients	Regional Health Service	In primary care: official prescription approved by primary care pharmacist	Dispensing pharmacy	Centralised purchase after bidding process: Moist dressings in primary and specialised care	In primary care: in health centres	Medical prescription for moist dressings excluded
	Patients at home: official prescription approved by primary care pharmacist	Dispensing pharmacy	In hospitals: direct purchase from labs				
Madrid	Regional Health Service patients at geriatric centres	Regional Health Service	Regional Health Service	Regional Health Service			
	Official prescription: patients at home	Dispensing pharmacy					
Murcia	Public bidding to determine price in health care facilities and social health care centres	Regional Health Service	Regional Health Service by negotiation and bidding process for centralised purchase	Health centres			
	Official prescription: for the general population	Dispensing pharmacy					
Navarra	Two different types of purchase through public	Regional Health Service	Purchase by Regional Health Service	Health centres			

	bidding: for social health care centres and ambulatory patients		after public bidding				
La Rioja	Purchase after public bidding for social health care centres	From reference hospital	Purchase by Regional Health Service after public bidding	Health centres			
	Official prescriptions with special approval for patients at home	Dispensing pharmacy					
País Vasco	Official prescriptions with special approval	Dispensing pharmacy	Centralised purchase by Regional Health Service after public bidding process	Health centres			
	At social health care centres, through group prescription form for the entire centre	Dispensing pharmacy					
Source	Information provided by the autonomous communities for this report.						
Notes	GAP: primary care management units.						

5.8 Supplementary pharmaceutical benefits in the autonomous communities

The autonomous communities have the power to approve complementary service packages. In Spain's pharmaceutical benefits scheme some autonomous communities choose to finance additional pharmaceuticals and health products to patients with certain processes, such as oncological cases and patients that have undergone transplants (antivirals and antifungals), spinal cord injuries, spina bifida, certain disabilities, tobacco addiction and tuberculosis, among others. In addition, paediatric products receive complementary financing in the case of large families or of chronically ill or disabled children.

The autonomous communities with supplementary service packages and the benefits provided therein are listed in Table 5.51.

Table 5.51 Supplementary pharmaceutical benefits in autonomous communities, 2009.

	Complementary pharmaceutical benefits
Andalucía	— By virtue of RD 159/1998 of the Regional Ministry of Health, of 28 July 1998, autonomous community funds are used to pay for the pharmaceuticals that were excluded from pharmaceutical benefits by the Ministry of Health (RD 166/1998, 24 July)
Aragón	— Morning after pill available at health care facilities (health centres and hospital emergency rooms) — Treatment with opioids (methadone) — Hypolipidemic agents for familial hypercholesterolaemia
Baleares	— Morning after pill available at health centres. Cost in 2009: €94,620 — Treatment of erectile dysfunction. Available at hospital pharmacies, when prescribed by urologist, for: diabetic men with erectile dysfunction and clinical evidence of neuropathy and/or macrovascular disease, diabetic men with erectile dysfunction of organic origin, spina bifida with neurological damage, renal transplant, spinal injury, multiple sclerosis and other demyelination and motor neuron diseases, severe pelvic injury, prostate cancer, secondary pathology resulting from hormone treatment and radiotherapy and pelvic surgery, renal insufficiency in dialysis. Cost in 2009: €433,821.37 — Health products: — urine incontinence pads free of charge for the disabled under age 21 — spacers especially for children 0-4 years of age
Castilla y León	— High-cost antiviral and antifungal medicines in cancer and transplant patients who are not pensioners. Reduced co-payment, maximum €2.64. Applicable to systemic antivirals: nucleosides, acyclovir, ganciclovir and valacyclovir, antimycotics for systemic use: triazoles (fluconazole and itraconazole) and imidazoles (ketoconazole) (Order SAN/415/2004, 27 February 2004)
Castilla-La Mancha	— Erectile dysfunction in patients with spinal cord injuries (at the National Hospital for Paraplegics) — Mastocytosis: extemporaneous compounds using disodium chromoglycate (reduced co-payment)
Comunidad Valenciana	— Incontinence pads and anal plugs for patients with spina bifida (Resolution 18/01/2001) — Fungible material for patients who use portable insulin infusion pumps (Resolution 5/03/2001) — Fungible materials for enteral nutrition (Resolution 29/06/2001) — Certain medicines for tuberculosis (Order 6 March 2002) — Incontinence material for patients with serious incontinence problems (Resolution 21/03/2002) — Financing of pharmaceutical benefits for the disabled, under the requisites established in Law 11/2003 and also for disabled people belonging to government mutuals — Financing of reactive strips to determine coagulation (Order 10/11/2003) — Free Conveen wipes and Speedicath catheters for patients with spina bifida, hydrocephalus and spinal cord injuries (Resolution 15/02/2006) — Financing of certain pharmaceuticals for erectile dysfunction in patients with spinal cord injuries (Order 26/06/2006) — Financing of obesity treatment in four hospitals (pilot testing) (Resolution 6/03/2008) — Financing of certain laxatives for patients with spinal cord injuries (Resolution 8/05/2008) — Financing of Peristeen anal irrigation system for patients with spinal cord injuries (Resolution 28/05/2008)
Extremadura	— Pharmaceutical products provided free of charge for: children in large families, children with disability or chronic illness. Requisite: products must be prescribed by physicians of the regional health service, financed by the Extremadura regional health service and included in the official package offered by the MSPSI
Madrid	— Urine incontinence pads free for patients in geriatric centres or with mental disability — Fungible materials for patients who use continuous insulin infusion pumps or need equipment for enteral nutrition — Reactive strips for testing anticoagulation — Pharmaceuticals for tuberculosis — Financing of pharmacological treatments for smoking cessation — Free provision of pharmaceuticals classified as diagnostics for hospital use that are now dispensed directly by hospital pharmacies, by virtue of Resolution 213/2008
Navarra	— Financing through prescription of: nicotine patches and bupropion for smoking cessation

País Vasco	— Tuberculostatics: supervised TB treatment for drug users in dispensing pharmacies (agreement in 2009 between the Regional Department of Health and Consumers' Affairs and the Professional Association of Pharmacists). Each pharmacy is remunerated according to the number of people attended — HIV: pilot testing in 20 pharmacies of the rapid screening test for HIV. Each pharmacy is remunerated a fixed amount for each test performed (agreement in 2009 between the Regional Department of Health and Consumers' Affairs and the Professional Association of Pharmacists). A total of 2886 tests were performed, with 24 being positive — Opioids: opioid treatment for persons with addiction, at dispensing pharmacies. (agreement in 2009 between the Regional Department of Health and Consumers' Affairs and the Professional Association of Pharmacists). Each pharmacy is remunerated according to the number of people attended — Home assistance: personalised dosage systems for persons attended by the home assistance services because they have difficulties with medication management. Participation by pharmacies is voluntary, and is remunerated with a fixed amount per patient (agreement in 2009 between the Regional Department of Health and Consumers' Affairs and the Professional Association of Pharmacists). — Spacers for children: with official prescription and prior approval. One package financed for life, reduced co-payment
La Rioja	— Financing of pharmacological treatments for smoking cessation
Source	Information provided by the autonomous communities for this report.

5.9 Research with medicinal and health products

In order to be authorised a pharmaceutical must go through various phases of research, the aim of which is to demonstrate the quality, efficacy and safety of the pharmaceutical. The research phases include: basic research, pre-clinical trials or animal testing and clinical trials in human beings. Any clinical trial involving human beings must be authorised by the AEMPS before it begins.

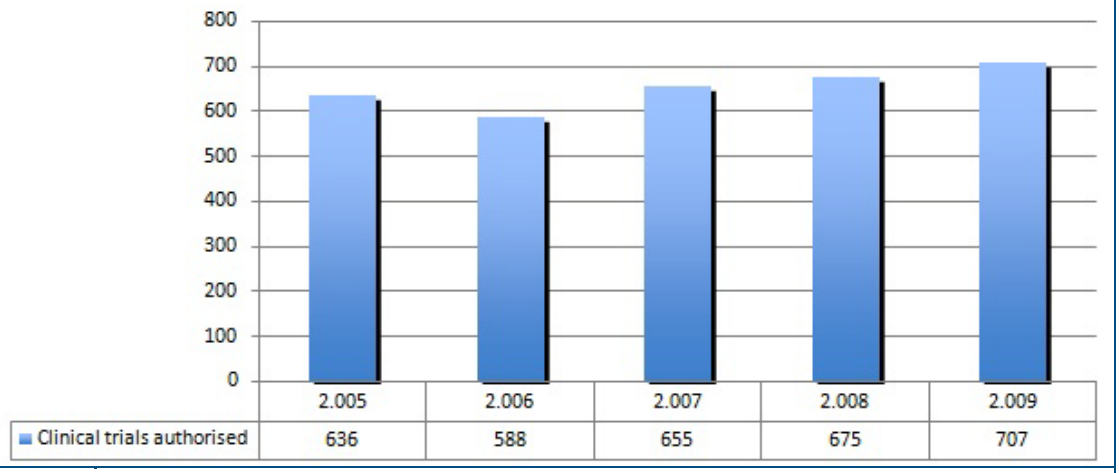
Even after the authorisation of a pharmaceutical, research continues in what are known as post-authorisation studies.

In 2009, the AEMPS collaborated in the evaluation and management of the second national call for applications for grants for clinical research projects on pharmaceuticals with non-commercial sponsors.

Also in 2009, the AEMPS presented, via its web page, the Office for the Support of Independent Clinical Research. This Office serves as a point of contact at the AEMPS for researchers and sponsors who may wish or find it necessary to make a consultation about technical and scientific aspects of a regulatory nature or regarding administrative or practical matters. The Office for the Support of Independent Clinical Research was created as part of the AEMPS General Strategic Plan 2009-2012,[27] specifically within its third objective: *"To support research, development and innovation in the area of medicinal and health products."*

[27] Plan Estratégico General de la AEMPS 2009-2012.
[http://www.aemps.es/actividad/nosotros/docs/planEstrategicoAEMPS_2009-2012.pdf]

Figure 5.14 Clinical trials authorised by the AEMPS in 2005-2009.



Source Annual report AEMPS 2009.

Over the course of 2009, authorisation was granted to 707 clinical trials, 25 applications were rejected, 32 applications were shelved due to abandonment by the sponsor and 19 of the trials authorised involved applications that had been submitted previously (Figure 5.14).

As for the evolution in the number of authorised clinical trials that simultaneously request that a product be designated as an Investigational Medicinal Product (IMP), a reduction is seen in 2009, perhaps indicating a fall in the number of new molecules that began their clinical development this year (Figure 5.15).

Although most clinical trials are still sponsored by a pharmaceutical company, over the past two years there has been an increase in the trials sponsored by researchers or scientific groups; in 2009 the figure reached 23% of the total number of clinical trials (Table 5.52).

Table 5.52 Distribution of clinical trials by type of sponsor in 2009.

TYPE OF SPONSOR	%
Pharmaceutical Lab	77
Researcher / Scientific Group	23

Source: Annual Report AEMPS 2009.[28]

The AEMPS evaluated over 70 applications for advanced therapy clinical trials and the corresponding Investigational Medicinal Products (IMPs). (Table 5.53).

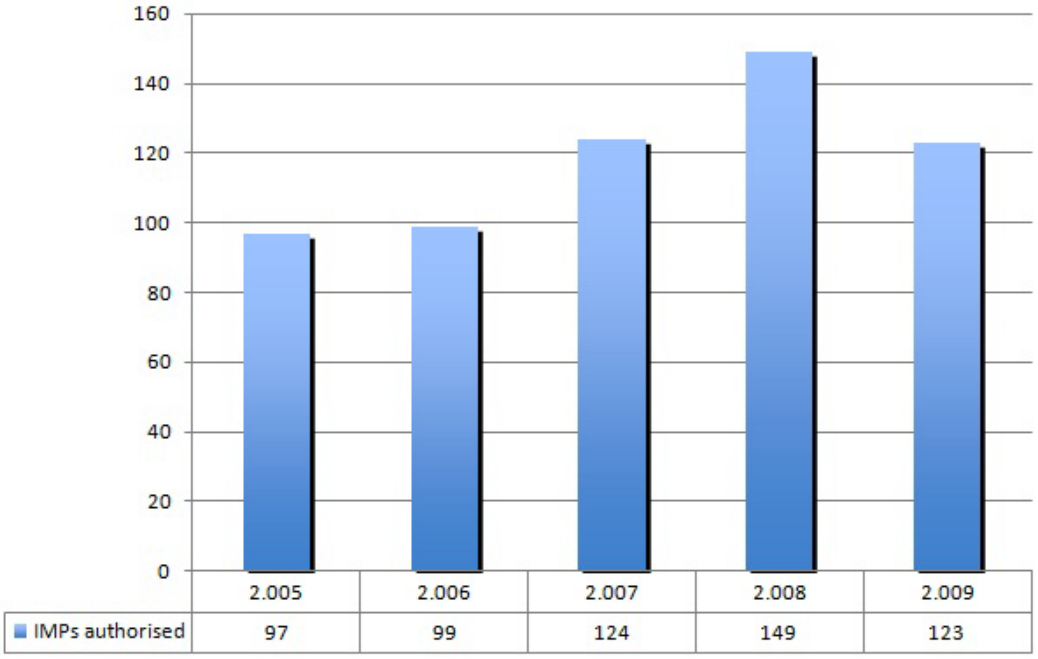
Table 5.53 Number of advanced therapy trials authorised in the 2005-2009 period.

NUMBER OF TRIALS	2005	2006	2007	2008	2009
Trials authorised	2	6	9	18	10

Source: Annual Report AEMPS 2009.[29]

[28] See footnote 1
[29] See footnote 1

Figure 5.15 **Investigational Medicinal Product (IMPs) authorised in 2005-2009.**



Source AEMPS Annual Report 2009.

6 Quality

6.1 Quality Plan for the SNS

Among the tasks of the Ministry of Health, Social Policy and Equality (MSPSI), the co-ordinating body of Spain's National Health System (SNS), is that of strengthening the system's cohesion and ensuring equity in the accessibility and quality of the benefits provided across the country, so as to guarantee the rights of all citizens, patients and users in their relations with the SNS. In this context initiatives are undertaken to enhance the quality of health care, by developing strategies and taking steps to promote excellence in professionals and in the organisation, with respect to both technical aspects and the knowledge and skills that form the basis of high-level clinical practice.

To reinforce these measures, the **Quality Plan for the SNS** was put in place, as provided in Law 16/2003 on Cohesion and Quality in the SNS.

The first Quality Plan was developed as part of the accords signed at the II Conference of Presidents of the Autonomous Communities (held in September 2005). At that time a budget of €50 million was established for 2006. Since then, the financial commitment has continued, with the allocation of €50.5 million in 2007 and €51.5 million in 2008. In 2009 an allocation of €51.5 million was agreed but the budgetary adjustments made necessary by the economic situation resulted in a final expenditure of €43,915,130.

The Quality Plan for the SNS is designed to benefit citizens and promote high quality health care focused on patients and their needs. It also aims to support health care personnel in the promotion of clinical excellence and in the adoption of best practices based on the best scientific knowledge available. Its overarching purpose is to increase the cohesion of the SNS and ensure maximum quality in the health care provided to all citizens, regardless of their place of residence, while at the same time offering tools to health professionals and health managers in the autonomous communities to assist them in their quality improvement efforts. The Quality Plan calls for specific actions to be taken; most of them are performed through ongoing collaboration with the autonomous communities and the autonomous cities of Ceuta and Melilla (where health care is managed by the National Institute of Health Management - INGESA).

The Plan covers six large areas of action: protection, health promotion and prevention; increased equity; support for human resource planning and development; clinical excellence; use of ICT to improve the care provided to citizens; and greater transparency.

In 2009, the Quality Agency of the SNS, as the body in charge of evaluating and periodically updating the Quality Plan, prepared a report on the Plan's past and future activity, working in close collaboration with the relevant Ministerial departments (balance de actividades y acciones previstas 2006-2010[1]). It summarises the actions carried out under the Plan up through 2008 and also the activity proposed for 2009 and 2010.

In relation to **protection, health promotion and prevention**, in 2009 the amount budgeted for actions to reduce health inequalities and their determinants was

[1] Quality Plan for the National Health System of Spain. Review of activities to date and summary of future actions 2006-2010. [http://www.msps.es/organizacion/sns/planCalidadSNS/informe0610/Index.html]

€14,750,000. Also, €1,170,000 was allocated for projects aimed at the promotion of healthy lifestyles, diet, physical activity and obesity prevention.

To be able to describe, systematise, analyse and compare information regarding **health policies, programmes and services**, the SNS Observatory prepared the SNS Annual Report 2008 (Informe Anual del SNS 2008[2]), with the collaboration of the various Ministerial departments involved, the autonomous communities and INGESA.

With regard to the Quality Plan's efforts to increase **equity**, in 2009 the Women's Health Observatory (OSM) reviewed the scientific knowledge and health care practices currently used in care provision during pregnancy, neonatal and postnatal periods, with the aim of broadening the current Strategy for Attending Normal Childbirth into a strategy that covers all reproductive matters. In addition, the first population-based survey on sexual health in Spain was conducted and the Strategy for Sexual and Reproductive Health is currently being developed, with the collaboration of the autonomous communities, scientific societies and social organisations. Continued effort has been devoted to providing health care personnel with adequate support and training on the topic of gender inequalities in health and to strengthening the gender perspective in health policies. Likewise, the Gender and Health Report 2007-2008 was prepared and disseminated by the OSM. The subject of the report is women and men in the health care professions. Also, the SNS Strategy for Health and Gender is currently being drawn up.

In 2009 the Subdirectorate General of Professional Regulation of the MSPS continued to plan for the system's need for specialists, nurses and assistant nurses, and also worked on the creation of a Register of Health Professionals. In addition it took action to promote a basic common training pathway for the various specialties. This pathway is considered a tool by which to obtain pluridisciplinary teams that are better prepared to ensure quality care and patient safety, as well as improved management of the human resources available.

Among the Quality Plan's actions to further **clinical excellence**, especially important in 2009 were the initiatives taken by the Office of Health Care Planning and Quality (a division of the SNS Quality Agency) to develop tools that promote clinical excellence, the creation of standards and recommendations, teaching accreditations and audits, improved patient safety, and the implementation of strategies with which to respond to pathologies of high prevalence and high social and economic cost. The enthusiastic participation of the regional health services as well as that of professional societies and social organisations suggests the usefulness of these initiatives and indicates that they are welcome.

Regarding the use of **Information and Communication Technology** to improve the health care provided in the SNS, special mention should be made of the Framework Collaboration Agreement with the Plan Avanza, between the MSPS and the Ministry of Industry, Tourism and Trade (MITT). The Plan Avanza is managed through the public enterprise Red.es, attached to the MITT and it is funded with 141 million Euros for the 2006-2009 period. The agreement has enabled all the autonomous communities to benefit from these funds thanks to bilateral agreements signed with Red.es. In 2009, the MSPS signed a new Framework Agreement with the Ministry of Industry, Tourism and Trade and Red.es, providing economic support for the autonomous communities, in the amount of 101 million Euros during the 2009-2012 period.

In relation to **health information**, the SNS Quality Plan has facilitated a high degree of participation by autonomous communities in the construction of a common health

[2] SNS Annual Report 2008. MSPSI. [http://www.msc.es/organizacion/sns/planCalidadSNS/isns2008.htm]

information system. At the Health Information Institute, the SNS Key Indicators (Indicadores Claves del SNS[3]) were selected and defined, and actions aimed at creating an SNS data bank were carried out. Similarly, improvements have been made to the existing subsystems of information related to the large areas of health care (health status, health care system, citizen satisfaction).

In addition, actions have been taken to enhance communication and information transparency, reducing the lag time between the production and the dissemination of data, and developing the contents of the Information System on the MSPSI web site. The annual SNS Information System Forum was also held.

In 2009, the SNS Quality Agency continued to disseminate the contents of the Quality Plan, strengthening the information and on-line consultation tools available on the web page, which is constantly updated. Eleven e-bulletins were published with news from the Quality Agency (boletines electrónicos de noticias de la Agencia de Calidad[4],) along with four on patient safety (Seguridad del Paciente[5]) and 11 issues of Impacto,[6] specifically for professionals.

Finally, within the SNS Quality Plan mention must be made of the award ceremony, held in December of 2009, for the winners of the third edition of the SNS Quality Awards (Premios a la Calidad en el Sistema Nacional de Salud[7]). The awards are considered an excellent way to stimulate best practices in the health system and to learn about and share such practices. A total of 164 projects were submitted, in the following categories: 65 in innovation; 41 in best practices; 33 in equality and 25 in transparency. They were studied by an evaluation committee comprised of two representatives of the autonomous communities, three representatives of scientific societies, one representative of patient associations and four from the MSPS.

Awards went to 11 of these projects, with each winning project receiving €38,741.58 in prize money. A special recognition award, not accompanied by prize money, was given in the area of care quality improvement. The winners of the awards are listed in Table 6.1.

[3] SNS Key Indicators. MSPSI. [http://www.msps.es/estadEstudios/estadisticas/sisInfSanSNS/inclasSNS_DB.htm]

[4] News Bulletin of the Quality Agency of the SNS [electronic resource]. Madrid: General Directorate of the Quality Agency of the SNS: 2009. [http://www.msc.es/organizacion/sns/planCalidadSNS/boletinAgencia/boletines-agenciacalidad.html

[5] Patient Safety Supplement [electronic resource]. Madrid: General Directorate of the Quality Agency of the SNS: 2009. [http://www.msc.es/organizacion/sns/planCalidadSNS/boletinAgencia/suplementoSeguridadPaciente/index.html

[6] Impact Supplement [electronic resource]. Madrid: General Directorate of the Quality Agency of the SNS: 2009. [http://www.msc.es/organizacion/sns/planCalidadSNS/boletinAgencia/suplementoImpacto/index.html

[7] SNS Quality Awards 2008. MSPSI. [http://www.msps.es/organizacion/sns/planCalidadSNS/ediciones_anteriores.htm]

Table 6.1 SNS Quality Awards, by category. Third edition, 2008.

SPECIAL RECOGNITION
To Prof. Dr. Alfonso Castro Beiras, for his entire professional career devoted to care quality improvement
INNOVATION IN OVERALL CARE QUALITY IMPROVEMENT
Hospital Infantil Universitario Niño Jesús, Madrid, for its "Organisation and implementation of a paediatric palliative care unit for the entire Community of Madrid"
Castelldefels Agents de Salut (CASAP), Barcelona, for its "Improvement in care quality, clinical management and leadership"
Primary Care Division of the Regional Health Service of Navarra, for its "Reorganisation of the care process at the primary care level"
BEST CLINICAL PRACTICES
Arrhythmia Unit. Heart Institute of the Hospital Clínico San Carlos, Madrid, for its "Remote monitoring of cardiac devices"
Gynaecology and Obstetrics Service at Hospital la Plana, Castellón, for its "Normal childbirth care and humanisation of all aspects of childbirth"
Area 11 of Primary Care (Madrid) and Hospital 12 de Octubre, for their "Early diagnosis of colorectal cancer: effective integration of care levels"
QUALITY AND EQUALITY
Association for prevention, reinsertion and care for female sex workers (APRAMP), for its "Mobile unit for direct intervention with sex workers and/or victims of sexual exploitation"
Primary Care management unit of Torrelavega-Reinosa, Cantabria, for its "Plan for the prevention of and response to gender violence"
TRANSPARENCY
Spanish Cardiology Society and the Spanish Heart Foundation, for their "Information for professionals and information for the general public"
Bilbao Primary Care Area, of the Basque Regional Health Services, for its "Service improvement through the management of shared knowledge"
Spanish Association of Paediatric Primary Care, for its e-journal: Evidence in Paediatrics

Source SNS Observatory. MSPSI.

6.2 Patient safety

Patient Safety (PS), or the minimisation of the risk of unnecessary harm caused by health care, has been included in the SNS Quality Plan, as one of the priority strategies of the MSPSI, since 2005. The key element of the SNS Strategy for Patient Safety, like the other SNS strategies, is that it is being implemented as a collaborative effort with the autonomous communities, scientific societies, patients, academic and research institutions, and other organisations. It is interesting to note that over 140 scientific societies and 22 patient and consumer associations signed the PS principles. The strategy's design is based on the WHO World Alliance for Patient Safety programme, the recommendations of the European Commission and of other international bodies. It attempts to promote, without interfering in the policies of the various autonomous communities, actions aimed at improving the following recommended areas: patient safety culture and awareness both at the professional level and among citizens; creation of adverse event reporting systems; implementation of safe practices in the care provided in the SNS and involvement of patients and citizens in the strategy.

In terms of the **patient safety culture and awareness among professionals and patients**, considerable effort has been made in increasing knowledge through training and informative activities targeting clinical professionals, health care managers, policymakers and patients. To this end, electronic means, and also in-person activities such as lectures and seminars, have been used. To facilitate people's access to this

important subject, the Ministry has a specific web page[8] offering news, events, links to on-line tutorials and other sites of interest, and also a library[9] with valuable documents about patient safety, classified by topic.

As for **professional training**, there has been a great deal of interest in the "*Patient Safety Training Programme*" among professionals and it is expanding significantly throughout the SNS. The most noteworthy training activities in 2009 include:[10]

- The second edition of the course "*Interuniversity Master in Quality and Patient Safety.*" Thirty students from various autonomous communities participated and carried out specific patient safety projects, descriptions of which have been published in a special, monographic issue of the journal *Medicina Clínica*.
- Four editions of the course "*Risk Management and Patient Safety Improvement*: *tutorial and support tools,*" in which 308 professionals in Spain and Latin America took part. This course has also been given twice in English, as part of the European project EUNetPaS. In them 72 professionals from the European Union took part.
- The first edition of four self-guided modules on "*Risk Management in Patient Safety,*" which was given to 20 professionals from different autonomous communities.
- On-line course "*Care quality and patient safety: prevention of adverse effects related to health care.*" This course is specifically designed for professionals who provide training to others. It is based on a multimedia module for undergraduate and post-graduate students that also contains didactic materials for the teacher. Twenty professionals from different autonomous communities have taken the course.

In 2006 and 2007 a consultation, using standardised methods, was conducted with experts, patients and scientific societies in order to reach an agreement regarding a prototype of a reporting system for adverse events. This system was pilot tested in various SNS hospitals in 2009, in order to assess its functionality and suitability for a broader pilot test involving various autonomous communities in 2010.[11]

In terms of the implementation of safe practices in the SNS health care centres to facilitate research in patient safety, specific funding was included in the 2009 call for applications for Strategic Action in Health grants, in the framework of the National Plan for Scientific Research, Development and Innovation 2008-2011.

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[8] Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2009. [http://www.seguridaddelpaciente.es]

[9] Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. Library. [http://www.seguridaddelpaciente.es/index.php/lang-es/biblioteca.html

[10] The patient safety web site contains information about these courses and the projects carried out by the students. Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. On-line tutorials. [http://www.seguridaddelpaciente.es/index.php/formacion/tutoriales.html]. Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. Patient safety projects. [http://www.seguridaddelpaciente.es/index.php/formacion/proyectos-seguridad-paciente.html]

[11] Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. SINASP. [http://www.seguridaddelpaciente.es/index.php/lang-es/proyectos/financiacion-estudios/sistemas-de-informacion-y-notificacion/sistemas-notificacion-incidentes/2008.html]

In addition, 9 million Euros were made available in 2009 to the autonomous communities through funds earmarked for strategies and subsidies, for activities conducive to the implementation of safe practices of proven effectiveness:

— Prevention of health care associated infection (HCAI), with actions especially targeting the promotion of appropriate hand hygiene at health care centres, through the Hand Hygiene Programme ("Programa de Higiene de Manos[12]"). This programme was developed by the SNS in collaboration with the WHO and all autonomous communities are taking part in it. Actions have also been undertaken to prevent infection associated with the insertion of central vein catheters in Critical Care Units (CCU), through the recommendations of the Zero Bacteriemia project ("Bacteriemia zero[13]") which is underway in collaboration with the WHO, with the participation of all the autonomous communities.
— Prevention of adverse events associated with: use of medicines (especially antimicrobials and high-risk medicines); surgery and anaesthesia, especially by implementing the actions recommended by the WHO in its campaign: "*Safe Surgery Saves Lives*"; nursing care (for the prevention of pressure ulcers and falls); care given to mothers and newborns; and the transmission of information and communication between professionals and patients.

In 2009 the autonomous communities carried out 103 projects, most of them in the prevention of adverse events.

Looking at **patient and citizen participation**, since 2006 there has been close collaboration with associations of patients and consumers. Against this backdrop the "*Patients for Patient Safety Statement*" was drafted and signed by 25 associations and federations (the majority of the groups of this type). Also fruit of this collaboration was the creation in 2009 of the Citizen Network of Trainers in Patient Safety (Red Ciudadana de Formadores en Seguridad de Pacientes[14]), as a training tool and a contribution to the information cascade regarding quality and safety in patient care.

Lastly, in 2009 all autonomous communities have continued working towards the introduction and expansion, in their respective territories, of the SNS Strategy for Patient Safety, which was adopted in most regions in 2005-06. In some regions the original strategic plan is still in place while in others, such as Madrid, Castilla-La Mancha and Comunidad Valenciana, a new plan is now in effect. Also, continued support has gone into the creation and consolidation of functional risk management units. In practically all of the autonomous communities efforts have been devoted to extending patient safety culture and knowledge, through training and awareness activities.

In addition, the implementation of safe practices has been promoted through specific funding for the autonomous communities, using the budget item reserved for strategies and subsidies. The safe practices funded, which all regions have put in place, are in the area of risk management and the prevention of incidents related to: patient

[12] Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. Hand hygiene programme. [http://www.seguridaddelpaciente.es/index.php/lang-es/proyectos/financiacion-estudios/programa-higiene-manos.html]

[13] Programme to reduce bacteraemia related to central vein catheters in the CCUs of the SNS. [http://www.seguridaddelpaciente.es/index.php/lang-es/proyectos/financiacion-estudios/proyecto-bacteriemia-zero.html?phpMyAdmin=mvRY-xVABNPM34i7Fnm%2C23Wrlq5]

[14] Patient Safety [web site]. Madrid: Ministry of Health and Social Policy; 2008. Citizen Network of Trainers in Patient Safety. [http://formacion.seguridaddelpaciente.es/]

identification, the use of pharmaceuticals, health care associated infection (HCAI), surgical procedures, nursing practices and communication among professionals and also between professionals and their patients.

As for the priority safe practices programmes implemented in collaboration with the WHO specifically for HCAI prevention, it should be noted that experts from all of the autonomous communities participated in the Hand Hygiene Programme, through which basic actions are being carried out across the country and the agreed-upon indicators are being evaluated. Furthermore, 30 professionals have been trained in hand hygiene and a number of dissemination actions were undertaken as part of the campaign of World Hand Hygiene Day promoted by the WHO and held on 5 May.

The other priority programme undertaken in collaboration with the WHO is the Zero Bacteraemia Project, in which Spain is serving as a demonstration country. All the autonomous communities and approximately 200 Critical Care Units (Cuss) have taken part in this project, with over 12,000 professionals being trained. The preliminary analysis of the data obtained from the project, which concluded on 30 June, indicate that the objectives set in terms of rate reduction were met. Moreover, safety culture and awareness in Spanish CCUs has increased, which will allow for the continuation of these practices and also the incorporation of another series of practices to reduce adverse events associated with critical care.

Table 6.2 reflects some of the actions carried out in 2009 in the autonomous communities, to introduce and expand plans, programmes and projects related to patient safety in their respective territories.

Table 6.2 Actions by autonomous communities to introduce patient safety plans and programmes, 2009.

Andalucía
- Continued action aimed at the expansion of the Patient Safety Strategy, begun in 2006.
Aragón
- Continuation of "Functional Patient Safety Unit" project, begun in 2005. - Positive patient identification system in regional health care centres. - Continuation of "Better Hand Hygiene" activities targeting health professionals.
Asturias
- Implementation of the projects "Prevention of infection related to central vein catheters in CCUs: Bacteraemia Zero," "Prevention of nosocomial infection," "Safe practices during surgery and other high-risk procedures" and the "Surgical verification list," all begun in 2009. - Continuation of the "Protocol for the prevention of pressure ulcers," begun in 2008. - Preparation and implementation of the "Protocol for the prevention of falls at hospitals." - Continuation of the project "Hand Hygiene," begun in 2005.
Baleares
- Continuation of the actions undertaken within the framework of the Patient Safety Strategy, begun in 2006.
Canarias
- Continuation of the project "Hand Hygiene using a multimodal strategy," begun in 2007. - Implementation of the project "Prevention of infection related to central vein catheters in CCUs: Bacteraemia Zero," begun in 2009. - Continuation of the project "Positive Patient Identification in hospitals," begun in 2008.
Cantabria
- Maintenance of the "Functional Patient Safety Unit" project, begun in 2007. - On-line patient safety course offered, 2009. - Continuation of the positive patient identification project undertaken in 2007, introducing it in all the hospitals of Cantabria. - On-line course on "Bacteraemia Zero" offered, begun in 2008. - Increased participation in the "Hand Hygiene" project, begun in 2006. - Beginning of the project "Caring for polymedicated patients."
Castilla y León

- Continued activities to promote a culture of patient safety and the development of a notification system for harmless incidents, begun in 2008.
- Improvement of activities aimed at the prevention of medication errors, as a support tool for risk management units in health care centres in Castilla y León.
- Renovation of the biometric identification system used on newborns in eight hospitals and introduction of the system in two more hospitals.
- Positive patient identification system for children in hospitals and other care facilities.
- Continuation of the projects "Bacteraemia Zero" and "Hand Hygiene."
- Creation and introduction of an evidence bank of nursing practices.
- Implementation of the following projects in the hospital in Ávila: improved safety for oncohaematological patients through the complete digitization of the oncology area in the pharmacy service; implementation of the surgery verification list in general and digestive surgery; transmission of information and communication with patients; improved information transmission between professionals and error reduction in the laboratory management process.
- Continued work on creation of quality standards in day hospital, convalescence unit and rehab unit, begun in 2008.
- Continued development of "Protocol for treatment adherence in persons who are over 75 and polymedicated," begun in 2008.
- Pharmaceutical care for patients with reduced renal function and antimicrobial treatment at the hospital.
- Prevention of adverse events in patients in acute care units and in the observation unit of urgent care services at Hospital Clínico Universitario de Valladolid.
- Maintenance of the system for reporting and learning from adverse incidents related to medication, at Hospital de Salamanca.

Castilla-La Mancha

Creation of the "Strategic Plan on Patient Safety in Castilla-La Mancha 2009-2012."

Comunidad Valenciana

- Actions related to the "Patient Safety Management Plan in Comunidad Valenciana 2009-2013."

Extremadura

- Actions related to the projects; Hand Hygiene, Positive Patient Identification and Bacteraemia Zero.
- Creation of safety commissions in Mérida and Llerena-Zafra, and also of a Functional Quality-Safety Unit in Mérida. Participation in the Central Patient Safety Commission of the regional health services.
- Creation of the study "Impact of adverse effects on hospital care in Extremadura," now underway.
- Continuation of actions for detection and reporting of adverse effects, telephone monitoring of patients released from hospital, web page devoted to patient safety and implementation of the Plan for Safety in Nursing Practices.
- Survey concerning patient safety conducted on health professionals.
- Continuation of training activities. Course on "Safety in patient care" developed by the School of Health Science Studies of Extremadura.

Madrid

- Early stage of creation of the "Patient Safety Strategy 2010-2012."
- Actions to improve safety in the administration of pharmaceuticals and of nutritional support in Critical Care Units.
- Actions to improve safety in cytostatic treatment.
- Procedure to make medication easier for patients upon release from hospital and to provide medication instruction sheets to patients upon release.

Murcia

- Actions aimed at the prevention of nosocomial infection.
- Continuation of the actions related to "Hand Hygiene", "Bacteraemia Zero" and "Positive Child Identification."
- Introduction of functional patient safety units.

- Navarra

- Continuation of actions related to the projects "Bacteraemia Zero," "Surgical verification list," "Patient Identification," "Vigilance/Control of nosocomial infection," "Hand hygiene" and "High-risk pharmaceuticals."
- Continuation of training and awareness activities in the area of patient safety.

País Vasco

- Continuation of actions related to the projects "Bacteraemia Zero," PLAN INOZ (Nosocomial Infection), "Hand Hygiene" and "Safe Surgery."
- Continuation of training and awareness activities in the area of patient safety.

- La Rioja

- Creation of on-line form and database for the reporting of events. Interprofessional committee formed to analyse the events.
- Initial design of intranet application for reporting incidents in accordance with due confidentiality conditions.
- Continuation of the actions related to "Hand Hygiene," "Bacteraemia Zero" and "Positive Patient Identification."
- Creation of a specific Functional Risk Management and Patient Safety Unit at Fundación Hospital de Calahorra.
- Implementation of actions related to the guide "Care of pressure ulcers" and for safety in the use of toilets and

bathrooms in hospitals.	
Ceuta	
- Start-up of the Intranet Portal USYR-SIUS (intranet-based information system for the Patient Safety Unit in Ceuta). - Development of hardware for itinerant training on the subject of patient safety and risk management.	
- Melilla	
- Introduction of ID bracelets for haemodialysis patients with internal arteriovenous fistulas. - Participation of Hospital Comarcal de Melilla in Phase III of the project SENECA (designed to develop Care Quality Standards for Patient Safety in SNS hospitals).	
Source	Information provided by the autonomous communities and INGESA for this report.

6.3 Clinical excellence

In 2009 the SNS Quality Agency placed special emphasis on the tasks of documenting unjustified variations in clinical practice and making proposals to reduce such variations. The funding necessary to ensure access in Spanish to the Cochrane Library (Biblioteca Cochrane[15]**)** and the Joanna Briggs Institute library (Biblioteca Joanna Briggs[16]) was maintained, thus allowing for continued universal access to these sources at no charge and from any computer on Spanish territory, by all health professionals, consumers, caregivers or other interested persons.

The Clinical Excellence metasearcher (metabuscador Excelencia Clínica[17]) was also developed. This tool allows users to perform a single search on clinical evidence in various databases in English and Spanish. It also offers built-in access to the Cochrane Library Plus, important secondary journals, health alerts, repositories of Clinical Practice Guides and technical reports, enabling consultations to be made from one point, with links to the best resources available.

Another continued line of activity was the preparation and use of Clinical Practice Guides associated with the SNS Strategies, reinforcing and extending the Guía Salud Project[18] and training professionals in these methodologies.

Support was also given to the Platform of Health Technology Assessment Agencies and Units,[19] in order to promote co-ordination between them and harmonise actions in relation to efficiency, effectiveness, safety, quality and equity in the SNS.

Finally, as in previous years, funding was provided to research projects involving health technology assessment, through a call for applications issued by the Carlos III Health Institute.

6.4 Standards, accreditation and audits

In 2009 the SNS Quality Agency prepared four documents on quality and safety standards and recommendations (informes de Estándares y recomendaciones en calidad y seguridad[20]) with the participation of groups of experts and representatives of the

[15] Online access to the Cochrane Library. [http://www.update-software.com/Clibplus/ClibPlus.asp
[16] Online access to the Joanna Briggs Institute. [http://www.joannabriggs.edu.au/about/home.php]
[17] Online access to Clinical Excellence metasearcher. [http://www.excelenciaclinica.net/
[18] Online access to GuiaSalud (SNS). MSPSI. [http://www.guiasalud.es/
[19] *Plataforma de agencias y unidades de evaluación de tecnologías sanitarias* (AUnETS), which is part of the Plan for Health Technology Assessment in the SNS. [http://aunets.isciii.es/web/guest/home]
[20] Web site of the Quality Plan for the SNS. [http://www.msc.es/organizacion/sns/planCalidadSNS/]

relevant professional associations, and also of other health professionals with outstanding experience and knowledge in the field. The reports addressed the following topics: hospital units providing diverse types of acute care; palliative care units; urgent care services and critical care units.

Although these recommendations are not normative, their purpose is to put at the disposal of health care authorities, public and private managers of health services and health professionals all the elements that contribute to improving the safety and quality conditions of the different units and services. The documents address vital issues such as patient safety and patient rights, the unit's organisation, management and physical structure and the human and material resources that should be available.

Within the quality improvement endeavour and within the framework of MSPSI's responsibilities, great importance continues to be given to the accreditation and auditing of health care facilities and services, in order to both ensure fulfilment by them of their duty to provide specialised training in the health sciences, and also for purposes of designating SNS Reference Facilities, Services and Units (CSUR-SNS), as provided by Royal Decree 1302/2006. Specific auditing plans and auditor training programmes have been developed for both.

As far is **CSUR-SNS designation** is concerned, in 2009 a total of 48 accreditations were granted (27 transplant units, 20 trauma units and one plastic surgery unit).

As for the **auditing of teaching centres and units**, every year the MSPSI draws up an auditing plan to support the process by which centres and units that provide post-graduate training are accredited. In the SNS, such training takes place in teaching centres and units that have been accredited specifically for such purpose and are audited regularly.

There are currently 3160 accredited teaching units, of which 2772 are hospital units located in 290 hospitals. There are also 164 family medicine units, 23 preventive medicine and public health units, 108 clinical psychiatry and psychology units, 18 occupational medicine units and 63 units for training in various nursing specialties.

As part of the Auditing Plan for teaching units, in 2009 a total of 183 audits of teaching centres or units were conducted (Table 6.3). These audits are performed in co-ordination with the autonomous communities, through a representative designated by them for this purpose.

Table 6.3 Teaching audits, 2009.

AUTONOMOUS COMMUNITY	HOSPITALS	UNITS	TOTAL
Andalucía	4	20	24
Aragón	1	2	3
Asturias	1	4	5
Baleares	1	2	3
Canarias	1	2	3
Cantabria	0	2	2
Castilla y León	3	8	11
Castilla-La Mancha	4	8	2
Cataluña	4	28	32
Comunidad Valenciana	4	16	20
Extremadura	0	6	6
Galicia	3	8	11
Madrid	5	18	23
Murcia	1	6	7
Navarra	2	2	4
País Vasco	2	14	16
La Rioja	1	0	1
Ceuta	0	0	0
Melilla	0	0	0
TOTAL	37	146	183

Source Office of Health Care Planning and Quality. SNS Quality Agency. MSPSI.

6.5 Health strategies in care processes

Since its inception, one of the tasks called for by the Quality Plan for the SNS has been the preparation of strategies designed to improve the health services provided by the SNS in cases of certain pathologies of high prevalence and high social and economic cost. As discussed above, the purpose of this Plan is to improve health care quality in the SNS, working in conjunction with all the regional health services, in order to reinforce the principles of equity and cohesion in the health care provided to all citizens.

The development of the SNS Health Strategies follows a process that has become well-defined and consolidated over recent years. The specific pathologies to be addressed by the strategies is the decision of the Interterritorial Council of the SNS (CISNS), at the proposal of the Ministry of Health, Social Policy and Equality. This decision leads to various actions in the areas of awareness, training and research, which are agreed upon and approved by the CISNS and then implemented by the autonomous communities. To date, strategies on cancer, ischaemic heart disease, mental health, diabetes, palliative care, stroke, rare diseases and COPD have been prepared and adopted.

One of the greatest strengths of these Strategies is the fact that the various stakeholders in each of the pathologies take active part in the strategy's creation; clinical professionals participate through their scientific societies, patients take part through patient associations, researchers take part through research institutes, agencies, universities, biomedical research networks and other bodies devoted to the topic. Governmental bodies participate at both national and regional levels, as they have the task of bringing about each strategy's implementation. All of these stakeholders participate either in the Institutional or the Technical Committee of each strategy. One

of the characteristics of all the health strategies is the presence of the gender perspective, in order to avoid bias and health inequities in each pathology addressed.

The government of each autonomous community has the duty of making available the means and resources necessary to meet the objectives set forth in each SNS Health Strategy, and to incorporate the pertinent measures into their own health plans and regional strategies.

The first evaluation of each SNS Health Strategy takes place two years after its creation. This evaluation is intended as an analysis of the current situation and degree of implementation of the strategy at national and regional levels. To this end, the Monitoring and Evaluation Committee of each strategy (which is made up of its Technical and Institutional Committees) collects and analyses the necessary information. The results of the work are evaluated periodically, with maximum transparency, to ensure that there is adequate feedback concerning the entire process. First, the data previously determined to be relevant in the strategy's indicators is collected, analysed and presented in the form of a report to the CISNS. Then there is a review and, where necessary, modification of the contents, objectives and recommendation of the Strategy document, taking into account both the new scientific evidence available and also the results of the evaluation process. Subsequent evaluations take place every four years.

The evaluation documents are the working documents of the Monitoring Committee of each strategy; they facilitate the group reflection process and contribute to the identification of areas for improvement in terms of objectives and indicators.

The first strategies to be evaluated were the cancer and ischaemic heart disease strategies in 2008, followed by those of diabetes and mental health in 2009, with the evaluation of the palliative care strategy also starting this year. The evaluation processes have proven to be important tools in the detection of critical points and in improving care quality.

The strategies are disseminated mainly by publication in electronic and printed format, the documentation distributed on the strategy's presentation day and through the official channels of the regional health services and participating scientific societies, and also through scientific journals.

In 2009 the strategies focused on ischaemic heart disease and rare diseases were translated into English, to increase their dissemination at the international level. In relation to rare diseases, the MSPSI is also participating actively in different European forums, including the European Committee of Experts on Rare Diseases and the project EUROPLAN (European Project for Rare Diseases National Plans Development).

Other actions performed in 2009 for the implementation of adopted strategies were: the funding of the projects "Determining criteria for the use of coercive measures during psychiatric hospitalisation and during transport to the hospital" and "Development of a mental health atlas in Spain"; the translation into Spanish of the six modules published by the World Health Organization, "*Cancer Control. WHO Guide for effective programmes*" which offers guidelines to important aspects such as planning, palliative care and other issues in the struggle against cancer; funding the publication "*Psychosocial intervention in adolescents with cancer,*" by the Spanish Federation of Parents of Children with Cancer and funding the Spanish Journal of Cardiology supplement "*Cardiovascular disease in women.*"

To aid in the dissemination and implementation of the SNS Health Strategies, the Quality Agency has also participated in various events, lectures, work panels and national conferences. It has also taken part in two of the five thematic conferences

planned under the framework of the European Pact for Mental Health and Well-being of the European Commission.

Finally the CISNS approved the lines of funding and the criteria for the distribution of funds to the autonomous communities and INGESA for the Health Strategies. A total of €10,715,750 was earmarked for funding projects related to the strategies on ischaemic heart disease, cancer, diabetes, mental health, palliative care, COPD, stroke and rare diseases.

In 2009 the autonomous communities and INGESA presented 187 funding requests for projects related to the implementation of the Health Strategies. They were distributed as follows: 21 cancer, 27 ischaemic heart disease, 18 diabetes, 58 mental health, 13 palliative care, 11 stroke, 13 COPD and 12 rare diseases. Another 14 projects were related to the implementation of several strategies.

Also in 2009, Royal Decree 924/2009 approved the direct concession of €4,000,000 (in subsidies to the autonomous communities and INGESA) for the implementation of the Palliative Care Strategy, with the aim of improving information, training, research and awareness regarding this strategy.

The funding of another project should also be mentioned: "Study on the equity and accessibility of the palliative care resources of the SNS." It is expected that this study will conclude in 2010.

Among the many steps taken in 2009 by the autonomous communities and INGESA for the implementation of the cancer, ischaemic heart disease, diabetes, mental health, palliative care, COPD, stroke and rare diseases strategies, the ones shown in **Table 6.4** are to be highlighted.

Table 6.4 Actions by autonomous communities to introduce and expand the SNS Health Strategies adopted by the CISNS, 2009

	Andalucía
Cancer	Continuation of "Comprehensive Oncology Plan II 2007-2012."
Ischaemic Heart Disease	Continuation of "Comprehensive Heart Disease Plan 2005-2011."
Diabetes	Actions to implement "Comprehensive Diabetes Plan II 2009-2013."
Mental Health	Continuation of "Comprehensive Mental Health Plan II 2008-2012."
Palliative Care	Continuation of "Comprehensive Palliative Care Plan 2008-2012."
Stroke	- Continuation of "Comprehensive Stroke Plan 2007-2012." - Continuation of "Andalusian Plan to Combat Stroke," which began in 2008 and is part of the Andalusian Plan for Emergency Services.
Rare diseases	Continuation of "Plan for the Care of Persons Affected by Rare Diseases 2008-2012."
	Aragón
Cancer	- Continuation of the processes developed for the care of breast cancer and colon cancer. - Inclusion in the benefit package of psychological support for cancer patients. - Implementation of the application "Hospital Tumour Registry"
Ischaemic Heart Disease	Creation of a working group to develop the "Ischaemic Heart Disease Programme of the Regional Health Service"
Diabetes	- Creation and presentation of the "Guide: diabetic children at school" Distributed at all public schools during the second semester of 2009. - Subsidies for projects of the Association of Spanish Diabetics, related to the provision of certain diabetological services.
Mental Health	A process designed to guarantee care continuity in children and adolescents with severe mental illness 2008-2011.
Palliative Care	- FOCUSS programme in palliative care (training visits): 5 courses with a total of 15 students (doctors and nurses). - Ongoing training in palliative care offered by the regional health service: various editions of three different courses for 184 nurses.
COPD	Creation of a working group to develop the "COPD Programme of the Regional Health Service."

Stroke	Early stage of creation of the "Stroke Programme of the Regional Health Service."
	Asturias
Cancer	Continuation of key programmes for interdisciplinary care of breast, prostate and y colorectal cancer, begun in 2005 and 2006.
Ischaemic Heart Disease	Continuation of key programmes for interdisciplinary care of ischaemic heart disease, begun in 2005.
Diabetes	Continuation of key programmes for interdisciplinary care of diabetes, begun in 2005.
Mental Health	Continuation of key programmes for interdisciplinary care of anxiety, alcoholism, dementia and depression, begun in 2006 and 2008.
COPD	Continuation of key programmes for interdisciplinary care of diabetes, begun in 2005.
Stroke	Continuation of key programmes for interdisciplinary care of stroke, begun in 2005.
	Baleares
Cancer	- Continuation of "Rapid referral circuits in cases of suspected breast or colon cancer," begun in 2008. - Continuation of the Cancer Strategy and the population-based cancer registry, begun in 2007. - Update of breast cancer screening programme, raising the age to include women up to 68 years old
Ischaemic Heart Disease	Continuation of the community-based registry of acute coronary syndrome with ST elevation, begun in 2008.
Diabetes	- Continuation of the "Guidelines for action in cases of diabetes mellitus," begun in 2007. - Continuation of the Diabetes Strategy, begun in 2008.
Mental Health	Continuation of the Mental Health Strategy and Action Plan 2006-2008.
Palliative Care	Publication of the Regional Palliative Care Strategy 2009-2014.
COPD	- Development of a system for the management of chronic pathologies (COPD) through individual medical records, begun in 2009. - Actions to raise the population's awareness of the effects of smoking (as part of the SNS Strategies on cancer, ischaemic heart disease, COPD and stroke).
Stroke	Continuation of actions to extend the project "Tele-Stroke," begun in 2005.
Rare Diseases	Launch of "Regional Registry of Rare Diseases."
	Canarias
Cancer	- Creation of "Programme for the early detection of colon cancer, application of colonoscopy criteria in symptomatic patients and referral of high-risk patients." - Distribution of "Clinical Practice Guidelines for the treatment of prostate cancer" drawn up in 2008. - Continuation of the "Colorectal cancer care programme" begun in 2008.
Ischaemic Heart Disease	- Early stage of the update of the "Regional Programme for the prevention and control of CVD." - Creation of working groups involving primary and specialist care on the topics of ERC (European Resuscitation Council), type 2 diabetes and ischaemic heart disease. - Beginning of working group on the prevention of obesity in children and youth. - Introduction of the "Cardiac Rehabilitation Programme 2009," with activity beginning at Hospital Universitario de Canarias.
Diabetes	- Distribution of the "Clinical Practice Guidelines for type 2 diabetes." - Early stage of the "Situation analysis of the Diabetes Plan" and the "Organisational model for the care of patients with type 2 diabetes." - Publication of the "Clinical Protocol for diabetic retinopathy."
Mental Health	- Creation of the "Mental Health Research Programme" 2009-2010. - Continuation of the project "Quality improvements in the care of common mental illnesses at the primary care level" (SaMAP Project), begun in 2007. - Continuation of the "Regional Registry of Psychiatric Cases (RECAP)," begun in 2005. - Continuation of the "Protocol for treating patients with eating disorders," begun in 2006. - Launch of project "Improving the physical health of patients with severe mental health disorders 2009-2010." - Distribution of the "Clinical practice guide to handling severe depression in adults" and the "Clinical practice guide to handling anxiety disorders in primary care."
Palliative Care	- Distribution of the "Clinical Practice Guide to palliative care." - First phase of evaluation of the SNS Palliative Care Strategy. - Training activities for health professionals and hospital coders.
COPD	- Training courses in the handling and interpretation of spirometry, for primary care health professionals.
Stroke	Early stages of the review of the "Functional guides to stroke units."
Rare Diseases	Early stages of the creation and implementation of the "Regional registry of rare diseases."
	Cantabria
Cancer	- Continuation and update of the "Programme for the early detection of breast cancer," begun in 1997. Complete digitization of the programme. Update of the Guide to Quality Control procedures in exploration units. Study of user satisfaction. Activities to make health

	professionals and citizens aware of the programme. - Continuation of the pilot testing of the "Programme for the Early Detection of Colon Cancer," begun in 2008.
Ischaemic Heart Disease	Continuation of the project "Prehospital fibrinolysis for Acute Myocardial Infarction with ST elevation (IAMCEST). Semi-automatic defibrillators in all basic life support ambulances," begun in 2006.
Diabetes	Publication of the manual "Handling obesity in adults at the primary care level."
Mental Health	Publication of the "Psychoeducation Guide" for the families of persons diagnosed with psychosis and the early phase of preparation of the "Mental Health Atlas" for the region.
Palliative Care	- Continuation of the "Comprehensive Palliative Care Programme," begun in 2006. - Twelve editions of the basic course on palliative care for primary care professionals. - Day-long conference on bioethical training "Ethics at the end of life." - Publication of a "Rapid consultation handbook. Comprehensive handling of symptoms in patients at the end of life" for health professionals and of "Informative guide for families and the care structure" for families and caregivers.
COPD	- Beginning of the "Strategy to improve the quality of life of patients with COPD." - Training courses on performing and interpreting spirometries. - Preparation of a "Protocol for treating patients with COPD."
Stroke	Continuation of the "Strategy for the acute care of patients with stroke" (stroke code, stroke units), begun in 2006.
Castilla y León	
Cancer	Early stages of preparation of the "Regional Cancer Strategy."
Ischaemic Heart Disease	Continuation of the "Regional Strategy for Ischaemic Heart Disease and Cerebrovascular Diseases 2008-2012."
Diabetes	Creation of the "Regional Diabetes Strategy 2009-2012."
Mental Health	- Creation of the "Regional Mental Health Strategy 2009-2013." - Opening of Rehabilitation and Convalescence Units in the health area of Palencia. - Start-up of the Care Continuity Unit, a reference in the region. - Start-up of programmes focusing on care for attention deficit and hyperactivity. - Start-up of the integrated social care model.
Palliative Care	Preparation of the "Regional Palliative Care Strategy."
COPD	- Evaluation of spirometries performed on COPD patients over the past two years. - Design of a clinical process for inclusion in the care guidelines module of primary care electronic health records. - Training and quality control programme in the performance of spirometries in health centres.
Stroke	Continuing implementation of care continuity upon release from hospital, begun in 2008.
Castilla-La Mancha	
Cáncer	Continuation of "Regional Oncology Plan 2007-2010. Strategies for cancer prevention and care."
Diabetes	Continuation of "Comprehensive Regional Plan on diabetes mellitus 2007-2010."
Mental Health	- Continuation of "Mental Health Plan 2005-2010." - Continuation of "Programme for the social integration and community support for persons with mental illness" (FISLEM - Social Health Foundation of Castilla-La Mancha for the Social and Occupational Integration of the Mentally Ill). - Application of the motivational interview technique in the Eating Disorders Unit. - Continuation of the "Programme for children with severe mental pathology in part-time day hospital" (Intensive Therapy Unit) in the La Mancha-Centro health area. - Preparation of the FISLEM service package (Resolution 18/12/2008, which adopts the sectorial service package of FISLEM). - Brief Hospitalisation Unit for Children and Youth opened in Ciudad Real, Centre for Specialised Care for Children (CAEM) opened in Toledo, residence opened in Albacete. - Continuation of the creation and implementation of "Integrated Care Processes in Mental Health," early stages of development of the computer application that will support these processes and creation of various mutual help groups, as a regional project.
Palliative Care	Preliminary preparation of the "Regional strategy on palliative care and non-cancer terminal patients."
Stroke	Stroke code introduced throughout the territory. Start-up of the region's first Stroke Unit, at Hospital General de Albacete.
Rare Diseases	Constitution of the Institute of Mastocytosis Studies in Castilla-La Mancha (Resolution 12/05/2009).
Cataluña	
Cancer	- Creation underway of the Regional Cancer Registry. - Colon cancer screening programme expanded (up to 17% of target population screened). - Evaluation of the cancer screening and the fast diagnosis programmes and implementation of the OncoGuide to colon and rectal cancer. - Definition and promotion of the multidisciplinary care model in cancer care. - Organisation of workflows for high-complexity pathologies.

	- Determining criteria and investment plan for renewing radiotherapy equipment 2008-2014. - Creation of chemotherapy and radiotherapy information systems. - Publication of the Cancer Strategy and Priorities in Cataluña 2009-2014. - Creation underway of cancer information web page.
Ischaemic Heart Disease	Implementation of Infarction Code, part of the Steering Plan on Cardiovascular Diseases.
Diabetes	Continuation of "Diabetes prevention and control plan," begun in 2004.
Mental Health	- External evaluation and presentation of the results of the community rehabilitation services 2007-2009. - Creation of accreditation indicators for the mental health and drug dependence network 2008-2009. - Overall evaluation of the implementation of the Mental Health and Addictions Steering Plan 2005-2009. - Evaluation of various severe mental illness (SMI) programmes, the individualised monitoring programme, suicide prevention and health at school, all of which were implemented during the 2006-2009 period. - Study on costs of depression 2008-2009. - Epidemiological study on the prevalence of pathological gambling 2008-2009.
Palliative Care	- Health Department call for applications for funding 2009. Subsidies for activities related to the care of persons with progressive chronic diseases in advanced stages and with limited life expectancy. - Workshops on palliative care and end-of-life care held at the Health Studies Institute for professionals, along with other training activities related to end-of-life care (2009-2010). - Publication of a document describing criteria for care complexity and levels of intervention in end-of-life care. - Early stages of homogeneisation of palliative care documents 2009-2010. - Courses on basic level end-of-life care and advanced training on organisation, teaching and research in palliative care 2009-2010. Call for applications to obtain grants for the master's programme in advanced end-of-life care. Day-long conference and course on practical aspects of the evaluation and improvement of quality in the care of patients with advanced diseases. - Beginning of the analysis of needs in relation to end-of-life care for children in Cataluña (2009-2010) and evaluation of the end-of-life care information system. - Beginning of the validation of the instrument to measure mental distress DME-08 (2009-2010).
COPD	Hospital survey about the performance of forced spirometry.
Stroke	Continuation of Stroke Code of the Cerebrovascular Disease Steering Plan, begun in 2006.
Rare Diseases	Design, implementation and evaluation of a comprehensive model for patients with a rare disease, in the public health system of Cataluña (2009-2010).
Comunidad Valenciana	
Cancer	Follow-up and evaluation of the Regional Cancer Plan 2007-2010.
Ischaemic Heart Disease	Continuation of the Regional Cardiovascular Disease Prevention Plan, begun in 2006.
Diabetes	Follow-up and evaluation of the Regional Diabetes Plan 2006-2010.
Mental Health	Continuation of the SNS Mental Health Strategy, begun in 2006.
Palliative Care	- Continuation and evaluation of palliative care within the Regional Cancer Plan 2007-2010. - Evaluation of the Regional Health Plan 2005-2009, specifically of Objective 5 regarding "Winning in health: social health care: palliative care." - Early stages of creation of the regional Comprehensive Plan on Palliative Care I.
Stroke	- Continuation of the SNS Stroke Strategy, begun in 2008. - Evaluation of the Regional Health Plan 2005-2009, specifically of Objective 5 regarding "Winning in health: cerebrovascular diseases: stroke"
Rare Diseases	- Creation of a line of research within the Public Health Research Centre (CSISP) on rare diseases. - Preparation of a viability analysis of a regional platform for rare diseases. - Framework agreement signed with CIBERER (CIBER on Rare Diseases). - Continuation of REpIER project with 16 other research groups from 11 autonomous communities in which epidemiological research for rare diseases is conducted. This project began in 2004. - Continued coordination of activities aimed at offering guidance to patients with rare diseases, through SAIP-Patient Attention and Information Services (part of the Regional Excellence Plan), begun in 2005.
Extremadura	
Cancer	- Continuation of Comprehensive Plan to Combat Cancer in Extremadura 2007-2011. - Funding for social health care projects in the field of health promotion and education 2009-2010. - Creation of the Regional Plan for the Prevention, Treatment and Curbing of Smoking 2009-2012. - Training activities related to cancer and its possible risk factors, given by the School of Health Science Studies in Extremadura.

Ischaemic Heart Disease	- Continuation of the Comprehensive Plan on Circulatory Diseases 2007-2011. - Funding for social health care projects in the field of health promotion and education 2009-2010. - Training activities related to ischaemic heart disease and its possible risk factors, given by the School of Health Science Studies in Extremadura.
Diabetes	- Continuation of Comprehensive Plan on Diabetes 2007-2012. - Community awareness campaign "Understanding diabetes and taking control." - Programme for the early detection of diabetic retinopathy in Extremadura, begun in January 2009. - Conclusion of on-line course on how to provide therapeutic education to persons with diabetes 2008-2009. - Training activities related to diabetes, given by the School of Health Science Studies of Extremadura.
Mental Health	- Continuation of Comprehensive Plan on Mental Health 2007-2012. - Gathering of users and managers of the mental health area: "Facing up to challenges, finding solutions." - Programme to promote mental health and improve the image of persons with mental illness (E-Tradis): Project "No difference." - Design and implementation of a system for process management and intersectorial co-ordination in the case of protected children who present behavioural disorders or other mental health problems 2008-2010. - Analysis of the current situation and adaptation of a rehabilitation model in cases of severe mental illness in prisons 2008-2010. - Publication of technical guidelines "Plans regarding nursing care in cases of mental illness." - Design of "Protocol for the coordination of care for employees of the regional government with mental health problems." - Design of a computer application for referral and follow-up of patients in Psychosocial Rehabilitation Centres.
Palliative Care	- Consolidation of groups working in partnership and in "Psychological Care." - Consolidation of the "Regional Palliative Care Observatory of Extremadura" and the "Plan for Volunteer Work in Palliative Care." - Publication of a clinical guide on "Handling opioids in palliative care" and creation of a web page. - "On-going Training Plan" for professionals working in palliative care.
COPD	- Early stages of introduction and expansion of the COPD care process. - Creation of the Regional Plan for the Prevention, Treatment and Control of Smoking 2009-2012. - Publication of material to support health promotion actions in the area of COPD and smoking.
Stroke	- Early stages of creation of a Regional Plan for Stroke Care. - Basic-level course on acute stroke care 2009-2010. - Training activities related to stroke and its possible risk factors, given by the School of Health Science Studies in Extremadura.
Rare Diseases	- Creation of the Comprehensive Regional Plan on Rare Diseases 2010-2014. - Campaign to raise awareness in Extremadura about rare diseases. - Creation of the Advisory Board on Rare Diseases of the regional health services.
Galicia	
Diabetes	- Introduction of the SNS Clinical Practice Guide to type II diabetes in primary care, along with training for professionals working in this area. - Introduction of the "Guidelines for shared follow-up of chronic patients." - Regional Project on Therapeutic Objectives in Diabetes (OBTEDIGA) 2007-2010 - Continuation of programme to provide additional retinographs to primary care services and continued training in retinography, begun in 2008.
Palliative Care	- Training in palliative care. - Co-ordination of Regional Palliative Care Plan. - Dissemination of Regional Palliative Care Plan to the general population.
Madrid	
Cancer	- Launch of the Cancer Surveillance Programme 2009-2012. - Creation of an integrated process of PC-SC for breast cancer patients. - Continuation of programme for colorectal cancer screening among the population, begun in 2008-2009. - Start-up of circuit in cases of suspected malignant pathology.
Ischaemic Heart Disease	Start-up of programme for surveillance and early detection of familial hypercholesterolaemia.
Diabetes	- Launch of the Diabetes Surveillance Programme 2009-2012. - Development of integrated process of PC-SC for patients of type 2 diabetes mellitus.
Mental Health	Continuation of Strategic Mental Health Plan 2008-2014.
Palliative Care	- Start-up of Palliative Care Information System: centralised registry of cases, palliative care clinical records incorporated into the other care information systems and design of specific documentation (single referral report, individualised interdisciplinary action plan, report on end of

	participation, report on end of participation- grieving programme). - Project underway to create training programmes for informal caregivers, enhancing and co-ordinating the participation of city councils, health centres and hospitals. Beginning of training for caregivers programme in the Palliative Care Unit of the San José Foundation Institute. - Update of the regional resource map.
COPD	Launch of the COPD surveillance programme "Regional Smoking Surveillance System 2009-2012."
Stroke	- Regional Stroke Care Plan "Neurovascular intervention in acute ischaemic stroke 2009-2010." - Launch of the Stroke Surveillance Programme 2009-2012.
Rare Diseases	- Universal neonatal screening for cystic fibrosis. - Continuation of universal neonatal screening for congenital adrenal hyperplasia 2005.
Murcia	
Cancer	- Continuation of regional programme for the prevention of colorectal cancer, begun in 2006. - Continuation of the regional programme for the prevention of breast cancer.
Ischaemic Heart Disease	Creation of the regional ischaemic heart disease programme.
Diabetes	Continuation of Comprehensive Plan on Diabetes 2005-2009.
Mental Health	Continuation of Comprehensive Mental Health Plan 2005-2009.
Palliative Care	Continuation of Comprehensive Palliative Care Plan 2006-2009.
COPD	Continuation of programme for early detection of COPD in primary care.
Stroke	Continuation of Comprehensive Stroke Care Programme 2009-2011.
Rare Diseases	Rare Disease Registry Project begun.
Navarra	
Cancer	- Design of the "Programme for the Secondary Prevention of colorectal cancer in high-risk population (part of PC-SC co-ordination plan). - Courses given on "Radiotherapy in the 21st Century" and "Genetics in colorectal cancer."
Ischaemic Heart Disease	- Programme for self-care in secondary vascular prevention underway. - Course given on "Diagnostic decisions in acute coronary syndrome."
Diabetes	- List of recommendations drawn up by the committee of experts in podological care in Navarra in relation to "feet at risk." - Three editions of the course on dietary treatment and two editions of the course on pharmacological treatment for type 2 diabetes. - Creation and presentation of "Guidelines for Action in primary care in cases of type 2 diabetes" and implementation of "Protocol for hospitalised patients with hyperglycaemia."
Mental Health	- Creation and implementation of the guide "How to handle anxiety in primary care. Guidelines for Action" (2010-2011). - Launch of the Day Hospital Programme as part of the "Mental Health Plan for Children and Youth" begun in 2008. - Creation of the "Strategic Plan of the San Francisco Javier Psychogeriatric Centre." - Launch of the "Intensive outpatient care programme" and the "Partial hospitalisation programme" for persons with eating disorders.
Palliative Care	- Three courses offered to PC professionals: "Accompanying patients and family at the end of life," "End-of-life care: what to do when nothing can be done" and "Nursing care when patients are dying. Subcutaneous injections." - Publication of the guide to the region's palliative care resources and distribution among professionals, caregivers/family members and patients.
COPD	- Beginning of research projects funded by official bodies: "Clinical audit on COPD exacerbations in Navarra," "Comparative analysis of the effects of exclusive strength training and those of a combined programme of strength and aerobic resistance on the functional capacity of COPD patients" and "Factors associated with muscle wasting in COPD." - Six sessions on performance of spirometry and Maximum Expiratory Flow measurement in PC.
Stroke	Continuation of Stroke Code throughout the region: update of protocols to be used for diagnosis and treatment, update of informed consent document, creation of slide presentation to inform and train patients and families.
Rare Diseases	- New "Autoimmune Disease Unit" at Hospital Virgen del Camino. - Continuation of "Multidisciplinary medical visits for patients with neuromuscular pathology" begun in 2008 and beginning of "Multiprofessional visits for patients with hereditary myocardiopathy". - Design of a descriptive study on the needs, profile and risk of psychological illness in the home care of persons with rare diseases. Finding solutions in telemedicine.
País Vasco	
Cancer	Continuation of colon cancer screening.
Diabetes	- Continuation of DE PLAN (Diabetes in Europe-Prevention using Lifestyle, Physical Activity and Nutritional intervention).

	- Continuation of Telemonitoring (Alava).
Mental Health	- Continuation of Internet monitoring project for patients with eating disorders. - Integration of the mental health care network of Vizcaya.
Palliative Care	Evolution of the situation in this autonomous community
Stroke	Creation of 2 Stroke units
Rare Diseases	Treatment of Paroxysmal Nocturnal Hemoglobinuria (PNH)
La Rioja	
Cancer	- Creation of Genetic Counselling Units in relation to cancer. - Determination of criteria for colon and breast cancer screening. - Start-up of the "Collaborative Work Portal" to support a multidisciplinary approach to treatment.
Mental Health	Three workshops held to improve detection of organic pathology in patients with psychosis, in community care settings.
Palliative Care	- Preparation of informative documents for patients receiving care in the palliative care service, and their families. - Preparation of a supplementary document in the electronic health records stating the admission criteria. - Distribution of living will form to health care centres and residences. - Distribution in electronic format of the Spanish Society of Palliative Care (SECPAL) Guide to Palliative Care. - Basic training in the area of pain relief, subcutaneous injections, communication and training of caregivers, for health professionals. - Design of a computer application that adds to the electronic health record an alert for the identification of terminal patients, assessment scales to measure analgesia, asthenia and general state and also a link with the living will registry.
Stroke	Pilot phase of the epidemiological study of stroke to be conducted in the region.
Rare Diseases	- Design of a study on the viability of a population-based registry of rare diseases in the region. - Creation of the Regional Registry of Information Resources in the area of Rare Diseases.
Ceuta	
Cancer	Improvements in screening for breast and colon cancer 2009-2010.
Ischaemic Heart Disease	Continuation of care and prehospital monitoring of critical patients with ischaemic heart disease.
Palliative Care	First evaluation of the introduction of the SNS Palliative Care Strategy.
COPD	Implementation of the SNS COPD Strategy in the health areas of Ceuta and Melilla 2008-2011.
Stroke	Implementation of the SNS Stroke Strategy: Stroke Code 2009-2011.
Melilla	
Cancer	Actions to improve screening for breast and colon cancer 2009-2010.
Ischaemic Heart Disease	Continuation of care and prehospital monitoring of critical patients with ischaemic heart disease.
Diabetes	- Improved access to specialised care by paediatric patients 2009-2011. - Publication of the "Guide to nursing intervention in people with diabetes" 2009-2011. - Inclusion of the indicators set forth in the SNS Diabetes Strategy in this health area's information system 2009-2011.
Mental Health	- Inclusion of the indicators set forth in the SNS Mental Health Strategy in this health area's information system 2009-2011. - Creation of Protocol for action in patients with addiction to benzodiazepine and Protocol for care of aggressive patients.
Palliative Care	First evaluation of SNS Palliative Care Strategy implementation.
COPD	Implementation of the SNS COPD Strategy in the health areas of Ceuta and Melilla 2008-2011.
Stroke	Implementation of the SNS Stroke Strategy: Stroke Code 2009-2011.
Source	Information provided by the autonomous communities and INGESA for this report.

6.6 Best practices in the SNS

To enable the autonomous communities and INGESA to share with others the best practices implemented in their respective territories, in 2009 they were asked to list, in order of importance, up to three of the best practices initiated or already underway in their various spheres of responsibility. To unify the information a specific form was

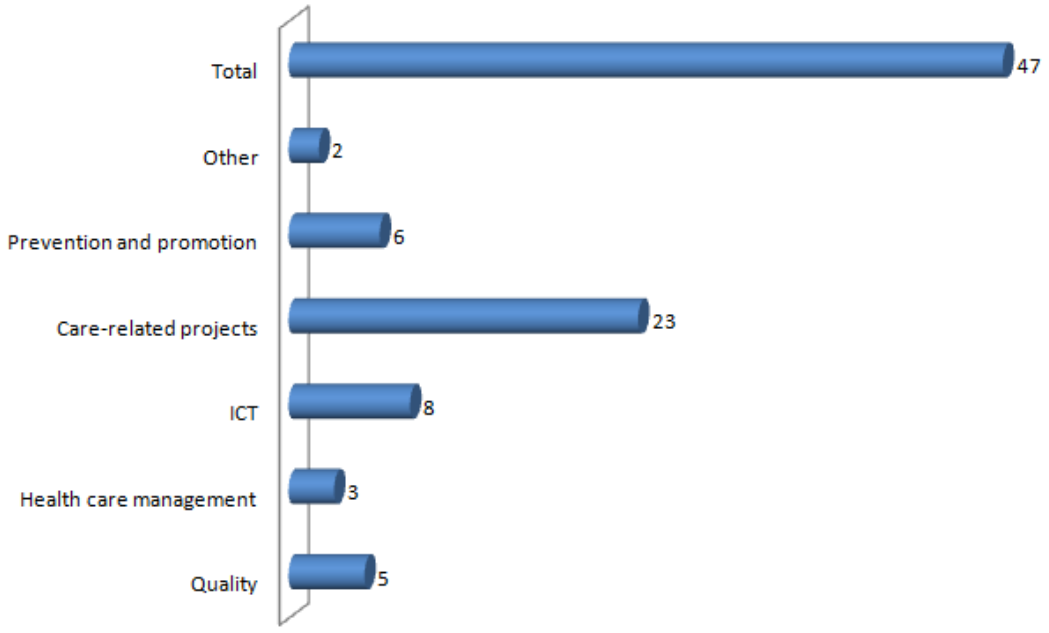
created, asking for the following information: name, area of action, year of application, methodology used to reach its objectives, indicators and evaluation process used.

The definition of "*Best Practice*" is the one used by the Panamerican Health Organisation, "*Any experience guided by appropriate principles, objectives and procedures or advisable guidelines in line with a given regulatory context or a consensus-based standard, or any experience that has produced positive results, proving itself to be effective and useful in a specific context.*"

The information furnished by the autonomous communities and INGESA has been grouped into the following categories: prevention and promotion, care activity, Information and Communication Technology (ICT), health service management and quality.

Of the potential 54 best practices (three per autonomous community and INGESA), descriptions of 47 were received (85.63%), in the following areas of action: 23 care activity projects (48.93%) followed by ICT, with 8 projects (12.02%), prevention and promotion 6 (12.76%), quality 5 (10.63%), health service management 3 (6.38%), and two in other categories (training and social services), with 4.25%. The classification of these best practices is shown in Figure 6.1.

Figure 6.1 **Number of best practices by area of action, initiated or already underway in autonomous communities and INGESA.**



Notes	Information furnished by the autonomous communities and INGESA.
Source	SNS Quality Agency. MSPSI.

It is of note that 77.2% (34) of the best practice projects submitted describe evaluation methods and 43.1% (19) mention the indicators defined for each of them, with 43.1% (19) already having obtained preliminary results.

As for where the project is applied, in 54.5% of them, it is applied throughout the autonomous community, with the rest being applied at the primary care level, at

particular hospitals, health areas or basic health zones. In 75% of them the year that the action began is specified; 2009 in 44.4%.

Table 6.5 to Table 6.10 show, by category, the name, description, area of application and year of implementation of the different best practices prioritised by the autonomous communities and INGESA (buenas prácticas priorizadas por las CCAA e INGESA).[21]

As mentioned above, the largest number of best practices submitted were in the category of care activity, with a total of 23 (Table 6.5). In the cases of Castilla-La Mancha and Murcia all three of the best practices described fall within this category. In Cataluña, Comunidad Valenciana, Madrid and País Vasco, two of the three projects described fall within this category (Table 6.5).

Table 6.5 Best practices related to care activity projects undertaken by the autonomous communities and INGESA, 2009.

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
Aragón	Design of a process to guarantee care continuity in children and adolescents with severe mental health disorders	The objective is to ensure care continuity and integrate health care with social and educational measures	Autonomous community	Not furnished
Asturias	Palliative Care Strategy	Lines of strategy include: care process and organisation process; patient autonomy; caring for the family, the caregiver and the professional; training and research; and Information Systems. For more information: www.astursalud.es	Autonomous community	2009
Canarias	RETISALUD, programme for the early detection and monitoring of diabetic retinopathy	The objective is to begin treatment early and reduce incidence of blindness, improve access to test and improve the referral process	Autonomous community	2006
Cantabria	Strategy to improve safety of care provided to polymedicated patients	Responds to the need to prevent risks associated with the use of medicines in these patients	Public sector health services	2009-2010
Castilla y León	Day hospital unit with immediate care for chronic patients	Its main purpose is to provide high-quality, fast and continued care to pluripathological patients and fragile elderly patients, avoiding the need for hospital admission	Salamanca Health Area	2008
Castilla-La Mancha	Model national reference centre for a rare disease	Diagnosis, monitoring and comprehensive treatment of mastocytosis	National and international	2009
	Stroke code	Actions to take in patients with suspected stroke code, guaranteeing referral to a hospital that can apply fibrinolytic therapy	Autonomous community	2010
	Determination of capillary INR values	Determination of INR by capillary puncture with immediate results and treatment at health centres	Autonomous community	Not furnished
Cataluña	Specific support team devoted to palliative care for children	Design and implementation of an end-of-life support programme, combining hospital and home care, provided by two teams	Cataluña	2009

[21] Information sheets describing the best practices highlighted by the autonomous communities and INGESA can be consulted through the SNS Annual Report 2009. [http://www.msps.es/organizacion/sns/planCalidadSNS/e01.htm]

	Case management nurse in multidisciplinary oncological care	Introduction of the figure of case management nurses in tumour committees or functional units, as a member of the team, to co-ordinate the treatment plan and care for the patient	Hospitals and specialised cancer facilities	Not furnished
Comunidad Valenciana	Care continuity	A care continuity circuit is established in the Department of Health, using the Ambulatory Information System.	Alicante Department of Health-Hospital General	2009
	Introduction of "Non-hospital Stroke Code"	The objective of this new protocol is to find out what impact the extension of the Non-hospital Stroke Code has at the provincial level	Province of Castellón	Not furnished
Extremadura	Pain programme	The objective is to improve training and advisory systems for professionals, and to improve health education for patients	Primary care	2003
	Volunteer work in palliative care	The aim is to improve palliative care by training volunteers to complement the work of professionals	Home, hospital and social health care centres	2006
Galicia	Application of protocol for normal childbirth and strategies to make only rational use of caesareans	The aim is to encourage less medicalised, more humanised childbirth and make more rational use of caesareans	Gynaecology Service at Hospital Xeral-Cíes Vigo	2007
Madrid	Management of risks related to use of pharmaceuticals	Functional units for risk management both in primary care and in specialised care, with the collaboration of pharmacists from the network of sentinel pharmacies. There is a web page for reporting incidents https://www.seguridadmedicamento.sanidadmadrid.org/	Autonomous community	2005
	Social health care circuit for patients with ALS	Plan to provide health and social care to ALS patients with the creation of five multidisciplinary units in hospitals, including the figure of case manager	Autonomous community	2006
INGESA (Melilla)	Intervention to improve the provision of pharmaceutical benefits for chronic patients	Analysis of the situation regarding polymedicated patients and steps to improve it at the primary care level, to increase adherence and detect problems in usage	Primary care	2009
Murcia	Programme for the care of polymedicated patients	One of the 22 lines of action set forth in the Action Plan to improve the use of pharmaceuticals 2009-2011	Primary care	2009
	Comprehensive programme for the care of stroke patients	Conceived as a comprehensive intervention encompassing all moments of the illness, with the participation of all levels of the health care system.	Autonomous community	2009-2011
	Programme to improve the use of antibiotics	Part of the Action Plan to improve the use of pharmaceuticals 2009–2011	Autonomous community	2009
País Vasco	Comprehensive care of outpatients with heart disease	The development of new protocols for the coordination of primary and specialised care, through improved communication, telemedicine, new resources and prioritising of actions	Hospital San Eloy	Not furnished
	Is the reporting of adverse events useful in improving the safety of the environment of critical patients?	To verify whether corrective measures are implemented to improve the factors related to the occurrence of adverse events in the Critical Care service.	Hospital Santiago de Vitoria-Gasteiz	1996-2004
Source	Includes the information provided by autonomous communities before final reporting date for inclusion in this document.			

Table 6.6 **Best practices in the category of Information and Communication Technology (ICT), undertaken by autonomous communities and INGESA, 2009.**

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
Baleares	Management of chronic pathologies in the electronic health records (EHR)	Process for managing pathologies through the EHR tool. The aim is to define the actions of each professional through an integrated action guide	Autonomous community	2010
Canarias	Family management units	Their primary function is to aid in the comprehensive and rational management of all processes affecting the assigned population	Basic health zones of Gran Canaria	2008
	Improved information system as a tool for the efficient management of resources, through the application of Adjusted Clinical Groups (ACG)	The aim is to incorporate knowledge regarding the disease burden, based on comorbidity, to improve service organisation, resource allocation and clinical management.	Primary care in the health area of Tenerife	Not furnished
Cantabria	Implementation of an electronic system for computer-assisted prescribing of pharmaceuticals	Electronic system that assists in the prescription of pharmaceuticals by active ingredient, enhancing safety and efficiency of the pharmaceutical benefits provided in Cantabria	Primary care	2009
Castilla y León	Blood transfusion safety	Transfusion safety system integrated into electronic health records, using PDA terminals with laser readers and WIFI infrastructure.	Province of Ávila	2009
	Integration Guides	These guides bring together the knowledge gained during implementation. The guides apply to all information systems, from care activity to waiting lists, hospital pharmacy, e-prescribing, nursing care, etc.	Regional Health Service	2009
Comunidad Valenciana	Teledermatology	Telemedicine applied to dermatology. Store and forward techniques in teledermatology	Valencia Department of Health – Arnau de Vilanova – Lliria	2008
Extremadura	Pain programme	The objective is to improve training and advisory systems for professionals, and to improve health education for patients	Primary care	2003
	Volunteer work in palliative care	The aim is to improve palliative care by training volunteers to complement the work of professionals	Home, hospital and social health care centres	2006
INGESA (Ceuta)	Implementation of multiple, integrated ICT projects	The aim is to improve service accessibility, patient safety, information confidentiality, integrated management of services and facilities, with the aid of ICT.	Hospital Universitario Ceuta	2009-2010

Source: Includes the information provided by autonomous communities before final reporting date for inclusion in this document.

Best practices related to ICT are the second largest category of projects described, with a total of eight (Table 6.6). Generally speaking, these projects aim to improve the management of certain organisational processes, care processes, patient safety processes and information systems.

In the category of prevention and promotion a total of six projects were described (Table 6.7), the target audience being mainly youth, adolescents and the elderly.

Table 6.7 Best practices in the category of prevention and promotion, 2009.

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
Andalucía	Youth Education	Guide and inform young people in sensitive areas, to help them combine fun with the acquisition of healthy habits	Autonomous community	2001
Baleares	Healthy breakfast at home and school	Programme to learn about and improve the habits of schoolchildren, through an on-line questionnaire with which to evaluate their habits. For more information: www.berenarsaludable.com	Regional Public Health Department	Not furnished
Cantabria	Strategy to improve hand hygiene	Education programme with workshops, leaflets, posters and guides, plus increased availability of alcohol solutions in patient settings.	Autonomous community	Not furnished
Extremadura	Programme "Exercise takes care of you"	To improve the quality of life, prevent dependence and promote health through more active lifestyles, with five subprogrammes	Autonomous community	2009
Galicia	Opening of Galician School of Health for Citizens	A forum for participation by patients, citizens and professionals, for better knowledge management and improved levels of health. There is a specific portal for citizens; www.sergas.es/escolasaude	Autonomous community	2009-2010
La Rioja	Healthy strolls	Programme "Healthy strolls: walk every day, you'll live longer and better," to encourage the population to make physical activity part of daily life	Autonomous community	2009-2013

Source: Includes the information provided by autonomous communities before final reporting date for inclusion in this document.

A total of five projects were described (Table 6.8) in the category of quality and accreditation models, affecting five autonomous communities.

Three of the best practice projects were related to service management (Table 6.9).

Finally, Table 6.10 describes two projects that do not fit in the other categories. One addresses a social issue, the occupational integration of patients with severe mental illness, and the other is a training program to improve patient safety.

Table 6.8 Best practices in the area of quality improvement, 2009.

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
Andalucía	Accreditation of centres, professionals and management units	Programmes for the accreditation of health centres and units, professional skills, ongoing training and web pages	Autonomous community	2009
Aragón	Quality indicators in the care of patients in critical condition	Ongoing monitoring of quality indicators in the care of patients in critical condition and comparison with other units and the standards set by the scientific society of this specialty.	Hospital San Jorge de Huesca	2007
Baleares	Introduction of quality model (EFQM)	Management based on the European excellence model (EFQM). Standardised work processes and procedures to permit evaluation through indicators.	Regional Pharmacy Department	2005
Cataluña	Accreditation model for acute care hospitals	Accreditation model: total quality management and EFQM model. Included in the Department of Health web page	Autonomous community	2006
Navarra	Plan for quality improvement in primary care	Patient-centred care model that pays special attention to accessibility, speed with which care is provided and the information available to users	Primary care	2009-2012
Source	Includes the information provided by autonomous communities before final reporting date for inclusion in this document.			

Table 6.9 Best practices in the category of health service management, 2009.

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
Galicia	Programme "With generics, we all win"	The aim is to help Galicia converge with the SNS in two indicators related to expenditure per official prescription	Autonomous community	2009-2010
La Rioja	Individual responsibility in the control of current expenditure and in environmental protection	Promoting the recycling of paper and cardboard, making optimal use of photocopiers and reducing telephone costs	Autonomous community	Not furnished
Madrid	Central clinical laboratory	Private management of analytical tests for 6 hospitals	6 hospitals	2008
Source	Includes the information provided by autonomous communities before final reporting date for inclusion in this document.			

Table 6.10 Other best practices undertaken by the autonomous communities, 2009.

	NAME	DESCRIPTION	AREA OF APPLICATION	YEAR INTRODUCED
País Vasco	Occupational integration of patients with severe mental illness	Collaborative plan involving different institutions, for the management of different agreements and accords regarding the social integration of patients with severe mental illness, from the Guipúzcoa extrahospital mental health unit	Extrahospital mental health unit of Guipúzcoa	Not furnished
Andalucía	Patient safety strategy	Projects related to training in patient safety, identification and recognition of reference nodes or best practice mentoring centres, and safe practices	Autonomous community	2009

Source: Includes the information provided by autonomous communities before final reporting date for inclusion in this document.

7 Equality initiatives

The Final Report of the WHO Commission on Social Determinants of Health, the Spanish translation[1] of which was released in Spain in 2009, states that within every country there are health differences closely linked to degrees of social disadvantage. Such inequalities and inequity, which are avoidable, are the result of the circumstances in which people live, work and age, the systems put in place to deal with illness and of the influence of political, social and economic forces.

Equity in health means that all people have the same opportunities to develop their potential for health and that nobody finds him or herself in a situation of disadvantage due to social position or other circumstances determined by social factors. The reduction of health inequalities is one of the highest priorities of Spain's autonomous communities, the Spanish Ministry of Health, Social Policy and Equality (MSPSI), the European Union (EU) and the World Health Organization (WHO).

Achieving health equity through action on social determinants requires concerted effort by all sectors whose policies have an impact on health. The MSPSI is aware of this and knows that it is possible to refocus all policies towards equity and towards achieving more equitable health systems. It therefore uses its political agenda, both national and international, to increase equity in health.

For this reason, among the various guiding principles of the SNS Quality Plan,[2] particular emphasis is placed on promoting equity, guaranteeing adequate health care for all and ensuring cohesion and human resource planning that will cover the entire society's needs.

7.1 Reducing health inequalities in the population

In 2009, the Spanish version of the worldwide report on social inequalities in health by the WHO Commission on Social Determinants in Health (CSDH) ("Subsanar las desigualdades en una generación")[3] was presented at what was then called the Ministry of Health and Social Policy, with the participation of important political figures and experts from Spain, the European Commission, WHO and other related bodies. Spain was the seventh country in the world to officially present the report.

Also in November 2009 the National Commission of Experts on Social Inequalities in Health drew up the first draft of a proposal for interventions to reduce social inequalities in health in the short, medium and long term in Spain. Work is currently underway to set the priorities of the interventions that will be put into effect.

In addition, work began on the project "Innovation in Public Health: monitoring social determinants of health and reducing health inequalities."[4] The project report served as support for the conclusions redacted on this priority issue during the 2010

[1] The English document is at: [http://www.who.int/social_determinants/thecommission/finalreport/en/]

[2] Web site of the SNS Quality Plan. MSPSI. [http://www.msps.es/organizacion/sns/planCalidadSNS/home.htm]

[3] The Spanish version is at: http://www.who.int/social_determinants/final_report/closethegap_how/es/index.html

[4] The Spanish version is at: [http://www.msps.es/presidenciaUE/calendario/conferenciaExpertos/docs/haciaLaEquidadEnSalud.pdf]

Spanish Presidency of the EU and presented to the Employment, Social Policy, Health and Consumer Affairs Council (EPSCO) in June of 2010.

With regard to the measures adopted in 2009 by the autonomous communities to reduce health inequalities in the population, efforts were focused on the areas of disability, immigration and the Roma community, as shown in Table 7.1 Besides the actions described in the table, all of the regions organise awareness and training activities for professionals in the various spheres of intervention, as part of the endeavour to reduce inequality. All regions also continue to engage in actions aimed at maintaining and further promoting universal screening for malformations and early detection of inborn endocrine and metabolic errors.

Table 7.1 Measures adopted by the autonomous communities to reduce health inequalities among the population. 2009

AUTONOMOUS COMMUNITY	MEASURES
ANDALUCIA	**IMMIGRATION:** Implementation of the actions called for by the Third Plan on Care for Migrants 2009-2012. **DISABILITY:** Co-ordination among the institutions and bodies involved in the Plan for Early Prevention 2005-2012.
ARAGÓN	**IMMIGRATION:** Implementation of the Integrated Plan for Intercultural Co-existence and of the translation programme initiated by the Directorate General on Immigration and Co-operation for Development. Annual renewal of the collaboration agreement with the NGO Médicos del Mundo.
ASTURIAS	**DISABILITY:** Collaboration agreements concerning care for people with disability of some type signed with the associations ASPAYM, ELA, COCEMFE and AESLEME. **ETHNIC GROUPS:** Collaboration agreement signed with the Roma Association of Asturias (UNGA) to work on the issue of equality in health. **COMMUNITY OUTREACH:** Continuation of the actions within the programme “No ogres, no princesses. Programme for emotional/sexual education in secondary school” begun in 2008. http://institutoasturianodelamujer.com/iam/wp-content/uploads/2010/06/Ni-ogros-ni-princesas_programa.pdf
BALEARES	**DISABILITY:** Continuation of the actions within the home rehabilitation programme "Tele-rehabilitation” begun in 2008. **IMMIGRATION:** Continuation of the actions in teletranslation and cultural mediation undertaken in 2008.
CANARIAS	**DISABILITY:** Continuation of actions within the “Social health care programme for the disabled” begun in 2005. **IMMIGRATION:** Continuation of the actions within the “Protocol for action and co-ordination in the provision of health care to immigrant minors” begun in 2007. **SOCIAL HEALTH CARE:** Collaboration agreement signed between regional government and local governments to implement the “Social Health Care Programme for the Elderly.“
CANTABRIA	**DISABILITY:** Analysis of the specific needs in the area of reproductive health and gender violence for women with disabilities. **IMMIGRATION AND ETHNIC GROUPS:** Launch of study on health determinants of the Roma community in Cantabria. Conclusion of the study on health determinants and access to health services by the immigrant community in Cantabria. (http://www.ospc.es - proyectos)

CASTILLA Y LEÓN	**DISABILITY:** Study to improve quality of life of persons with severe spinal injuries and adaptation of the family-based drug abuse prevention programme to the deaf community. http://www.jcyl.es/web/jcyl/Familia/es/Plantilla100/1142233180339/_/_/ **ETHNIC GROUPS:** Subvention to the Roma Secretariat Foundation for public health activities aiming to improve the health-related habits of the Roma community. Adaptation of the family-based drug abuse prevention programme to the Roma community. D`Quedada Programme for the prevention of drug abuse in Roma youth (14-17 years of age) in Barrio España in the city of Valladolid. http://www.jcyl.es/web/jcyl/Familia/es/Plantilla100/1142233180339/_/_/ **IMMIGRATION:** Collaboration agreements signed with local and provincial governments to carry out health promotion activities targeting the immigrant population. Vaccination program for immigrant children/youth and street education programmes for immigrant population. Launching of first drug abuse prevention programme targeting the immigrant population. Plan of action to improve assistance offered to immigrant population for the year 2009, improving access and quality of health care for immigrants, overcoming language barriers with telephone interpreting services. http://www.jcyl.es/web/jcyl/Familia/es/Plantilla100/1142233180339/_/_/
CASTILLA- LA MANCHA	**DISABILITY:** Continuation of actions related to early prevention, disability assessment, social and work integration, lodging and shared housing, access to natural and social environment, community integration. http://www.jccm.es/cs/Satellite/index/plan1212675651383pl/1193043110017.html **IMMIGRATION AND ETHNIC GROUPS:** Subventions for the implementation of specific programmes to train people with special needs or who have difficulties in professional insertion or requalification, regardless of their work situation. http://www.jccm.es/cs/Satellite/index/tramite1212676427352tr/1193043193192.html Action protocol in primary care for immigrant population and programme to promote, reinforce and expand the information and work orientation services. http://www.jccm.es/cs/Satellite/index/programa1212675971016pl/1193043149153.html http://www.jccm.es/cs/Satellite/index/programa1212672376276pl/1193043192541.html **SOCIAL HEALTH CARE:** Programmes and projects for the homeless population. http://www.jccm.es/cs/Satellite/index/programa1212675485996pl/1193043192583.html
CATALUÑA	**DISABILITY:** Training sessions for health professionals in the hospital sector, taught by associations of people with varying functional disabilities (deafness, physical disability, brain damage) **ETHNIC GROUPS:** Integrated plan for the Roma community in Cataluña 2009-2013. http://www20.gencat.cat/docs/governacio/Accio%20Ciutadana/Documents/Info%20general/Arxius/PIPG%202009-2013.pdf **IMMIGRATION:** Continued implementation of the three lines of action laid down in the steering plan on immigration in the health sector (reception, intercultural mediation and training of professionals to better respond to diversity) 2006-2010. http://www.gencat.cat/salut/depsalut/pdf/inmigra2008.pdf
COMUNIDAD VALENCINA	**DISABILITY:** Continuation of actions related to activity 2.8 of the regional Excellence Plan to improve disabled people's access to the health system, launched in 2005. http://publicaciones.san.gva.es/publicaciones/documentos/V.1955-2006.pdf **IMMIGRATION:** Continuation of actions in vaccination strategies to eradicate remaining areas with low vaccination coverage, paying special attention to the immigrant population. Further implementation of activity 6.6 of the regional Excellence Plan to reduce language and cultural barriers launched in 2005, starting a liaison translation service in seven hospitals in 2009. http://publicaciones.san.gva.es/publicaciones/documentos/V.1955-2006.pdf
EXTREMADURA	**DISABILITY:** Piloting of neuro orthopaedic unit at Hospital Materno Infantil in Badajoz and expansion of the agreement with the associations that provide sign language interpreting. **ETHNIC GROUPS:** Continuation of actions in the plan for the promotion and social participation of the Roma community, adopted in 2007. Through the Roma Development Programme workshops for health agents and on health education were held. **IMMIGRATION:** Continuation of actions aimed at the immigrant population, through the collaboration agreement signed by the Ministry of Labour and Immigration and the autonomous community, for actions in reception, immigrant integration and educational reinforcement. In 2009, actions in the areas of reception, education, employment, housing, social services, health, children and youth, women, participation, awareness and co-development were carried out through intercultural mediators. Call for applications for annual subventions for public and non-profit private bodies with projects in the areas of reception and social integration of immigrants.

MADRID	**DISABILITY:** Monitoring of the dental health programme for disabled children and adults and the project to improve dental health care for autistic people. Implementation of training and awareness programme about different issues affecting disabled people, for health professionals. Continuation of actions in the plan for early detection of hypoacusia in newborns, which was implemented in 2009 in all public hospitals with maternity wards. Continuation of activities related to consultancy, assessment and monitoring of specialized mental health and intellectual disability services and to improving access of disabled persons to public health facilities. **ETHNIC GROUPS:** Continuation of actions in the health promotion and health education programme and in the drug abuse information and orientation service for the Roma community. Implementation of training and awareness programme for health professionals. Especially worth noting among the courses taught is "Intercultural social mediation, a valuable tool in health care," which promotes the role of the community intermediary with ethnic minorities. Implementation of global actions included in the Plan to combat social exclusion, designed to improve the provision of health care to ethnic minorities. **IMMIGRATION:** Continuation of actions for the immigrant population included in the new Integration Plan 2009-2012. Different activities and workshops on health promotion and education, related to routine vaccination programmes and HIV prevention for immigrant population in situation of vulnerability. Unification of information and dissemination of informative materials on topics of special relevance for immigrant population. **SOCIAL HEALTH CARE:** Continuation of advisory actions by mobile team for the excluded population, to make health care more accessible to people in situations of extreme risk and inequality. Continuation of activity targeting homeless people over the age of 18 with serious chronic mental illness.
MURCIA	**IMMIGRATION:** Creation of a plan for training and intervention in intercultural mediation in the context of primary health care 2009-2010. http://www.murciasalud.es/espacioss.php **SOCIAL HEALTH CARE AND DISABILITY:** Creation of a social health care co-ordination model for the region. http://www.murciasalud.es/espacioss.php
NAVARRA	**DISABILITY:** Preparation of comprehensive plan for disabled persons 2009-2012. **ETHNIC GROUPS:** Evaluation and update of health promotion programme for Roma community. Reorientation towards new health objectives and towards primary care health centres. **IMMIGRATION:** Study and dissemination of primary health care for immigrant population and proposal for improvements related to health promotion.
PAÍS VASCO	**ETHNIC GROUPS:** Continuation of actions in the 2nd Basque Plan for the comprehensive promotion and social participation of the Roma community 2008-2011. **IMMIGRATION:** Continuation of actions in the 2nd Basque Plan on immigration 2007-2009. **SOCIAL HEALTH CARE:** Continuation of actions in the 2nd interinstitutional plan for greater social inclusion 2007-2009.
RIOJA	**IMMIGRATION AND ETHNIC GROUPS:** Continuation of activity by health mediators in the Roma community, informing population about health care services, accompanying chronic patients who are difficult to monitor, vaccination campaigns, mediation between patients and health care personnel. Interpreting services in primary and specialised care.
CEUTA and MELILLA	**DISABILITY:** Continuation of actions in the social health care coordination programme by INGESA and INSERSO, to attend people with disabilities, launched in 2007. **IMMIGRATION:** Implementation of emergency obstetrical care project for students in Mauritania, taught by health care professionals from Ceuta, Andalusian Association of Midwives, the NGO ENYANIN and the Chinguetti Foundation. **ACCESS TO CARE:** On-line appointment service at each health centre in the health areas of Ceuta and Melilla.
Source	Includes the information provided by the autonomous communities and cities before final reporting date for inclusion in this document.

Reducing health inequalities in cities

With regard to health equity in cities and as part of the agreement between the MSPSI and the Spanish Federation of Municipalities and Provinces (FEMP) to strengthen the

Spanish Network of Healthy Cities,[5] in 2009 special attention was placed on the network's strategic activities in the area of equity.

The collaboration between the Ministry and the Federation has contributed to the fact that there are now 150 cities belonging to the Spanish Network of Healthy Cities, while in 2002 the figure was just 36. All of the cities in the network have a municipal health plan underway or are currently developing it (this is a requirement for membership).

Furthermore, the Action Plan calls for encouraging all local governments in the country, regardless of whether they belong to the Network, to implement programmes targeting the most disadvantaged social sectors in terms of equality, health and economic situation; 53 specific projects in 49 Spanish cities were carried out in 2009.

Reducing health inequalities in the Roma community

In the context of the National Strategy on Health Equity aimed at the Roma community, the comparative study concerning the national health surveys conducted on the general population and those specifically studying the Roma ethnicity was presented.[6] The study's findings indicate that this community is affected by health inequalities and that the source of many of them are the group's social determinants.

The study reveals a clear social gradient in health and that the Roma population has worse results in many of the indicators. These poor results are evident not only when the Roma community is compared to social groups in a better socio-economic situation, but also when it is compared to groups in a less favourable situation.

The recommendations derived from this comparative study and also the priority intervention areas have been discussed by the health focus group of the State Council of the Roma Community (CEPG) in which experts and representatives of the Roma community participate actively. The results of this endeavour reflect a real understanding of needs and have served as the foundations upon which the health section of the action plan for the development of the Roma community is built. The aim of this plan is none other than to promote equity.

In addition, in 2009 further work went into the project *"Health and the Roma Community: Analysis of the Situation in Europe"* that was launched in 2007 to reach a better understanding of the health situation of the Roma community across Europe. This project, which was funded by the European Commission's Directorate General for Health and Consumers (DG-SANCO) and promoted by the Roma Secretariat Foundation (FSG), was undertaken in seven countries: Bulgaria, Slovakia, Spain, Greece, Portugal, Czech Republic and Rumania, using as its model the work carried out in Spain as part of the collaboration agreement between the then Ministry of Health and Social Policy and the FSG. In October of 2009 an international seminar was held at the Ministry on the subject of Health and the Roma Community: Analysis of the Situation in

[5] Healthy cities of the 21st century.
[http://www.msps.es/profesionales/saludPublica/prevPromocion/promocion/ciudadesSaludables/ciudadSalud.htm]

[6] Web site of the comparative study.
[http://www.msps.es/profesionales/saludPublica/prevPromocion/promocion/desigualdadSalud/docs/Diptico_MSanidad.pdf]

Europe.[7] At the seminar the most relevant findings of the project were presented, along with recommendations and action proposals derived from the analysis of such findings.

These recommendations should serve to refocus actions and policies, at both the national and the European levels, so as to increase health equity and create a more inclusive society.

Reducing health inequalities in the immigrant population

In 2009, participation has continued in health-related elements of the Strategic Plan for Citizens and Integration (2007-2010),[8] which formulates the strategies necessary to ensure that access to the public health system and to health care takes place in conditions of equality and that it contributes to achieving the integration and full participation of immigrants in the host country.

Since our society is increasingly global and people travel more and more frequently, some important phenomena need to be addressed with regard to public health. Three studies were published on this subject in 2009:[9]

- *Report on infectious diseases imported by immigrants residing in Spain who travel for a short time to their countries of origin.*
- *Report on Chagas disease affecting Latin Americans residing in Spain.*
- *Report on basic strategies for addressing infectious diseases in immigrants, travellers and travelling immigrants.*

Another project undertaken in the field of health and the migrant population was the creation of a tool with which to evaluate the cultural competence of health care institutions and professionals. The aim of this project is to reach consensus regarding which cultural competencies are the most important so as to ensure that the care provided to the immigrant population follows best practices.

At the international level, Spain continued to take part in the project AMAC (Assessing Migrants and Communities: Analysis of Social Determinants of Health and Health Inequalities). This is a project co-funded by the European Commission's Directorate General for Health and Consumers and the International Organization for Migration (IOM) designed to assess the relations and commonalities among different projects underway in the different member states, in the field of migration and health.

The project's final conference took place in September of 2009. At this event, the health priorities selected for the Spanish presidency of the EU in 2010 were presented, as the project bears close relation to the priority of reducing health inequalities and monitoring social determinants in health. The project advocates the adoption of the *"Health in all Policies"* approach, which means that health is to be addressed transversally and the issue of health, and community outreach, must be present in the planning and implementation of integration strategies. It also underlines the need to

[7] Press release: seven European countries pool health information about Roma community for the first time. [http://www.msps.es/gabinetePrensa/notaPrensa/desarrolloNotaPrensa.jsp?id=1655]

[8] Plan Estratégico de Ciudadanía e Integración. [http://www.mtin.es/es/sec_emi/IntegraInmigrantes/PlanEstrategico/index.htm]

[9] Migration and health – Ministry of Health and Social Policy (various studies). [http://www.msc.es/profesionales/saludPublica/prevPromocion/promocion/migracion/migracion.htm#viajeros

develop policies that improve access to health care systems, in order to achieve health equity for the entire population.

7.2 Reducing health inequalities in the prison population

The objective of prison health care is to protect the health of individuals serving custodial sentences and to ensure that incarceration has no deleterious effects on their health, as provided by the Spanish Penitentiary Act and its Regulations[10] and all the recommendations of the Council of Europe).[11] Prison health services must adhere to the same quality standards as followed by the SNS in attending the non-incarcerated community.

Spanish legislation states that the health authority responsible for providing care for the physical and mental health of the inmates, and also for maintaining adequate health and hygiene conditions in prison facilities, is held by the Penitentiary Administration. This forms part of the *"set of health services provided by the central government and by the health services of the autonomous communities"* according to the Spanish General Health Care Act.[12] In addition, the Spanish Law on Quality and Cohesion in the SNS[13] reinforces the idea of linking prison health care to the SNS, by integrating the former into the SNS through the regional health services.

The co-responsibility between the penitentiary administration and the health administrations established in the legislation has given rise, over the last few years, to various collaboration agreements signed by the regional health services and the Ministry of Home Affairs, enabling the prison population to receive the specialised and hospital care it may need outside of the prison facilities, in conditions similar to those experienced by the rest of the population.

Authority in prison health corresponds to Penitentiary Health Care Co-ordination Agency. This is the central unit that organises all the peripheral care services existing at each penitentiary facility; it depends on the General Secretariat of Penitentiary Institutions, the body in charge of the administration of all penitentiaries in Spain except those located in Cataluña, where responsibility in this matter has been devolved.

Population attended

The prison population is comprised mainly of young members of underprivileged social groups, with most inmates aged between 20 and 40 years. The majority are men of

[10] Ley Orgánica 1/1979, de 26 de septiembre, General Penitenciaria. [http://www.judicatura.com/Legislacion/0096.pdf]

[11] Council of Europe Committee of Ministers (1998). Recommendation No R (98) 7 of the Committee of Ministers to Member States concerning the ethical and organisational aspects of health care in prison. Strasbourg, Council of Europe. [https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=530914&SecMode=1&DocId=463258&Usage=2]

[12] Ley 14/1986, de 25 de abril, General de Sanidad. [http://www.msps.es/organizacion/sns/planCalidadSNS/pdf/transparencia/Ley_14_86_GRAL_SANIDAD_1.pdf]

[13] Ley 16/2003, de 28 de mayo, de cohesión y calidad del Sistema Nacional de Salud. [http://www.msc.es/organizacion/sns/planCalidadSNS/pdf/transparencia/LEY_COHESION_Y_CALIDAD.pdf]

Spanish nationality, although the proportion of other nationalities has increased considerably in recent years, reaching 35% in 2008. The level of education is low (most inmates have not completed even basic education) and the group has a low level of job skills. Most of the inmates went to prison for the first time at a young age and there is a significant number of reoffenders (almost 40%).

In December 2008 prison health care provided services to 73,558 inmates in penitentiary facilities all over Spain. Of all of these inmates, 54,746 (76%) were convicted prisoners while 17,849 (24%) were prisoners on remand. All together 92% were men and 8% were women (Table 7.2).

Table 7.2 Distribution of inmate population by autonomous community. 2008.

Autonomous community	Men	Women	Total Inmates
Andalucía	15,391	1,244	16,635
Aragón	2,416	141	2,557
Asturias	1,493	130	1,623
Baleares	1,951	139	2,090
Canarias	2,983	314	3,297
Cantabria	761	19	780
Castilla y León	6,807	624	7,431
Castilla-La Mancha	2,320	33	2,353
Comunidad Valenciana	6,588	617	7,205
Extremadura	1,379	58	1,437
Galicia	4,793	291	5,084
Madrid	8,069	1,310	9,379
Murcia	888	91	979
Navarra	244	21	265
País Vasco	1,285	120	1,405
La Rioja	391	23	414
Ceuta	279	36	315
Melilla	258	10	268
TOTALS	**67,608**	**5,950**	**73,558**

Source: Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

Care activity

The objectives of prison health care include, besides effective integration with the regional health services, the design of a Strategic Quality Plan that lays down the guidelines for harmonised care with each one of the regional health services, based on a model of progressive convergence of penitentiary and non-penitentiary care processes.

In 2008, there were 8187 admissions to penitentiary hospital beds. The average length of stay was 79 days. Over the course of the year a total of 26,190 radiological studies were performed on the inmates, with 70.37% of them taking place at the penitentiary facilities themselves. A total of 112,619 samples were sent to the reference laboratories for analysis.

The number of specialist consultations was 142,464, of which 92,760 took place in penitentiary facilities and 52,711 took place in health care facilities belonging to the public network, meaning that the prisoner had to leave the prison and be transported to the place of the visit (Table 7.3).

On 7897 occasions prisoners were transported to public health care facilities for diagnostic and therapeutic procedures. Also, 7624 rehabilitation sessions took place,

5978 of them in the gym located in the Penitentiary Centre Madrid-VI. A total of 324 outpatient surgery procedures were performed, 363 radiology therapy sessions and 983 haemodialysis sessions.

Table 7.3 Specialist consultations taking place in penitentiaries and in health care facilities in the public network. 2008.

Speciality	Number of consultations		
	Within the penitentiary	Outside the penitentiary	Total
Odontology	46,264	2,198	48,462
Psychiatry	28,182	1,197	29,379
Traumatology	622	7,966	8,588
Gynaecology and obstetrics	4,248	1,994	6,242
Optics	6,781	459	7,240
Infectious diseases	3,268	2,698	5,966
Internal medicine	2,058	1,729	3,787
Surgery	243	5,519	5,760
Digestive system	215	3,085	3,300
Dermatology	824	2,257	3,81
Ophthalmology	0	3,438	3,438
Otolaryngology	0	2,988	2,988
Urology	0	2,463	2,463
Cardiology	0	1,642	1,642
Neurology	0	1,532	1,532
Endocrinology	8	1,143	1,143
Pneumology	0	821	821
Rehabilitation	0	1,646	1,646
Nephrology	0	425	425
Rheumatology	1	319	320
Other specialities	46	7,192	7,238
Total	**2049,801**	**2074,687**	**1710,624**

Source: Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

Over the course of 2008 there were also 4797 admissions to public hospitals, with a frequentation rate of 79.3 admissions / 1000 inmates per year, and 4812 discharges with an average stay of 7.0 days. The daily average of hospitalised inmates was 92.9. The most frequent causes of hospitalisation were diseases of the digestive system (19.99%), followed by HIV infection and associated illnesses (HIV+TB), which accounted for 16.7% of the discharges. The high proportion of admissions due to digestive diseases can be explained in part by the high prevalence of hepatitis C infection (estimated to be present in 27% of the inmate population in 2008) (Table 7.4).

Table 7.4 Hospitalisations by pathological group. 2008.

DIAGNOSIS	Discharges 2008	Average length of stay
Diseases of the digestive system	962	4.4
HIV infection	806	5.0
- HIV infection without TB	744	4.5
- HIV infection with TB	62	11.1
Diseases of the respiratory system	413	9.7
Diseases of the circulatory system	295	7.8
Injuries and poisonings	263	6.7
Musculoskeletal or connective tissue disease	224	5.6
Traumas and burns	201	7.9
Mental disorders	166	11.1
Obstetrical causes	161	3.7
Symptoms, signs and ill-defined conditions	141	7.5
Diseases of the nervous system and sensory organs	135	12.3
Otolaryngological diseases	130	3.9
Diseases of the genitourinary system	122	8.4
Diseases of the skin and subcutaneous cellular tissue	116	4.0
Endocrine, metabolic and immunity diseases	87	10.3
Infectious and parasitic diseases	84	7.7
Accidental poisoning by drugs	60	5.1
TB without HIV infection	47	12.0
Ophthalmologic diseases	45	5.1
Diseases of the blood and blood-forming organs	38	9.1
Diseases of the oral cavity, salivary glands and jaws	28	6.0
Gynaecological diseases	26	5.1
Unknown	10	19.2
TOTAL	**4,812**	**7.0**

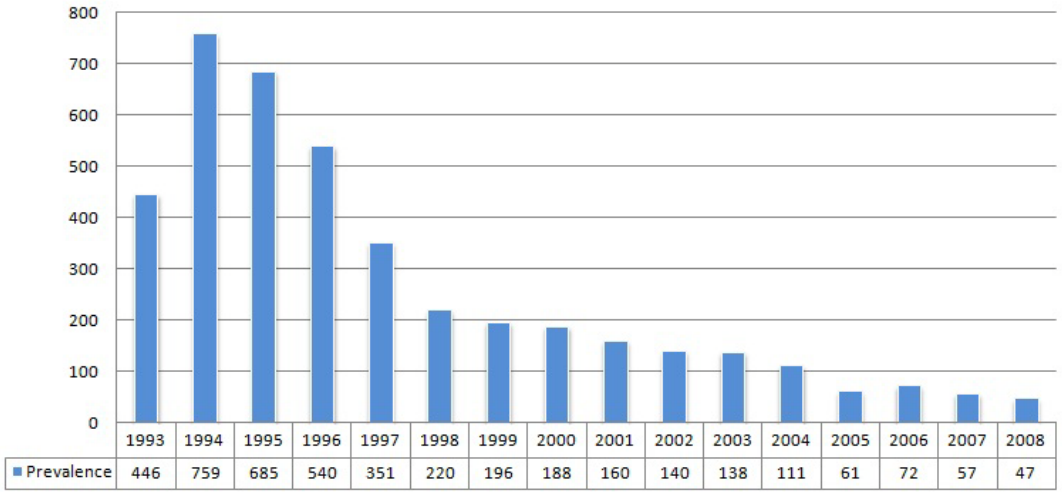
Source: Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

Incidence and evolution of the most prevalent diseases

The health care provided in prisons involves the most disadvantaged social groups, who tend to be isolated from the traditional health care circuits before incarceration. Transmissible diseases with a high social impact, such as tuberculosis, acquired immunodeficiency, sexually transmitted diseases, viral hepatitis, drug addiction and, especially, mental illness, are closely linked to marginality.

In 2008 the average number of inmates known to be infected with HIV was 7.8%, which confirms the downward trend that has been visible in recent years. Forty-seven cases of AIDS were diagnosed, also a sign of a clear downward trend that has been visible since 1995. The average age of reported cases in 2008 is 40.7±6.8 years, the highest age observed since records began (Figure 7.1).

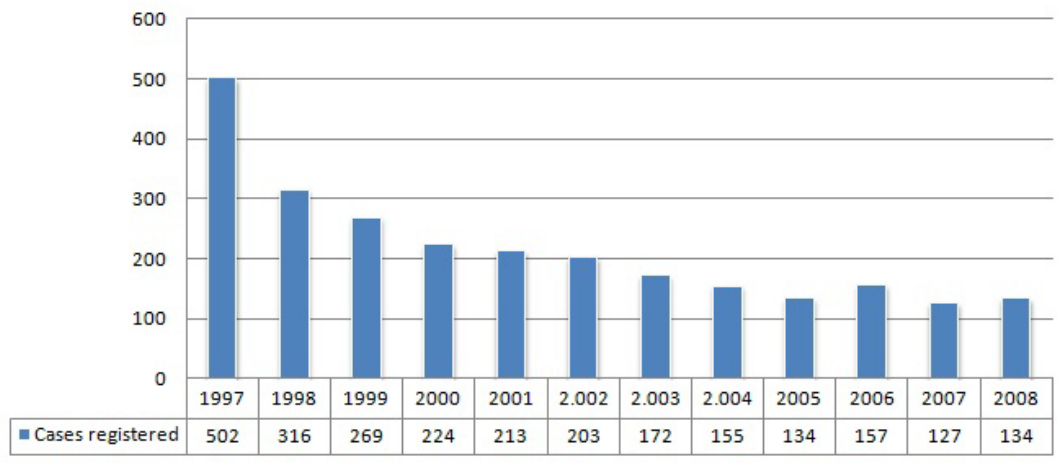
Figure 7.1 **AIDS cases diagnosed in penitentiary institutions by year of diagnosis. 1993-2008.**



Notes	Data may vary with respect to previous editions due to delay in notification and because data is updated annually.
Source	Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

In 2008 the number of cases of tuberculosis increased in relation to 2007, although the rate of incidence remained the same (2.2 cases of tuberculosis per 1000 hospitalised inmates). The average age of these tuberculosis cases is 38.8±8.9 years, the highest since records began (Figure 7.2). The foregoing gives even greater relevance to the measures called for in the programme to prevent and control tuberculosis in penitentiaries. The daily average of inmates receiving treatment for tubercular disease was 107, and the daily average of inmates receiving chemoprophylaxis was 341.

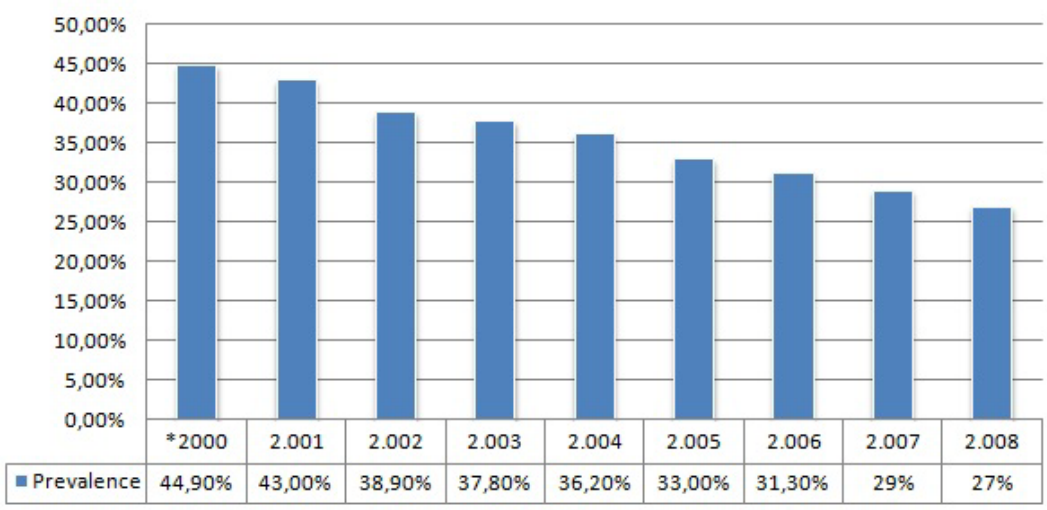
Figure 7.2 **Evolution in the number of cases of tuberculosis. 1997-2008.**



Source	Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

The percentage of inmates known to be infected with the hepatitis C virus, in 2008, was 27%, which reflects the downward trend visible in recent years. The average number of inmates receiving treatment for chronic hepatitis C in 2008 was 490 (Figure 7.3).

Figure 7.3 **Evolution in the prevalence of infection with the hepatitis C virus. 2000-2008.**



	*2000	2.001	2.002	2.003	2.004	2.005	2.006	2.007	2.008
Prevalence	44,90%	43,00%	38,90%	37,80%	36,20%	33,00%	31,30%	29%	27%

Notes * Estimated figures.

Source Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

Caring for inmates with mental health disorders represents the most significant public health problem within prison health care. The latest epidemiological studies conducted in Spanish correctional facilities indicate that up to 40% of the inmate population present some type of mental illness. Approximately half of these individuals have problems related to the use of psychoactive substances and up to 4% suffer severe mental illness.

A different case is that of inmates who have committed a crime as a result of mental illness and have been found to have no criminal responsibility, but who are sentenced to a security measure that stipulates internment in an appropriate facility and treatment for their illness. This necessarily entails a high degree of co-ordination between the different bodies involved in seeing that the measure is fulfilled (judicial system, social health care services in the patient's community of origin and the penitentiary administration), meaning that it is often difficult to achieve efficient results in the social response to such a situation. To analyse this problem, the penitentiary administration has proposed that working groups be created in the autonomous communities, with representatives from each of the administrations involved, along with representatives from organisations of families and patients with mental illness. Currently work in this area is underway in Madrid, País Vasco, Aragón, Andalucía, Castilla-La Mancha and Baleares.

Pharmaceutical benefits

The procurement, storage and distribution of the pharmaceuticals that are prescribed to inmates in all the correctional facilities are part of the health care budget of penitentiary

institutions. Facilities with a capacity of between 1100 and 1800 inmates have their own hospital pharmacy service.

Pharmaceutical expenditure consumes a significant portion of the overall budget of the General Secretariat of Penitentiary Institutions. For this reason, a system was put in place several years ago to evaluate and improve the methods of procurement and monitoring of rational use of pharmaceuticals and health products, with the aim of making these activities as efficient as possible. There is a list of pharmaceutical products that must be procured centrally, through the Penitentiary Health Care Co-ordination Agency. Generally, these are the ones that represent the greatest share of expenditure in the penitentiary system: antiretrovirals, hepatitis A, B, A+B vaccines, flu vaccines, atypical neuroleptics (olanzapine and risperidone), interferons and ribavirin.

The total pharmaceutical expenditure (centralised pharmaceuticals sent to the correctional facilities and also those procured directly by the facilities) in 2008 was €52,255,638.74 (Table 7.5).

Table 7.5 Total pharmaceutical expenditure by penitentiary institutions. 2008.

Expenditure on products acquired directly by facilities	14,440,794.53
Expenditure on products acquired through centralised system	37,814,844.21
Number of inmates	60,674 (60,424 not including Navarra)
Total expenditure	52,255,638.74
% direct acquisition/number of inmates	19.83
% centralised acquisition/number of inmates	52.15
% total expenditure/number of inmates	71.98
Notes	Figures in Euros.
Source	Penitentiary Health Care Co-ordination Agency. General Secretariat of Penitentiary Institutions. Ministry of Home Affairs.

Organisation

Every penitentiary centre has an infirmary with medical consulting rooms, a first aid room, a pharmacy deposit and a variable number of beds for patients who require closer vigilance. They are all outfitted with the necessary technical equipment and appropriate material and instruments. The inmates' residential units also have medical consulting rooms.

The health personnel working there includes doctors, nurses, nursing assistants, diagnostic radiology technicians and pharmacists. The care provided corresponds to first level care and is thus comparable to the care given at primary care facilities (health centres). As in health centres, the professionals are organised into primary care teams.

Both specialised care and hospital care are integrated into the public sector health care network, by means of outpatient visits and also through what are known as Restricted Access Units. These units are built by the penitentiary administration in the hospitals corresponding to each correctional facility and they allow appropriate care to be provided to hospitalised inmates, while guaranteeing the safety of hospital staff and other users of the health care system.

The penitentiary system also has two psychiatric hospitals, located in Alicante and Seville, for the application of security measures involving internment, ruled in criminal proceedings for mentally ill individuals deemed to have a high risk of violent behaviour.

The health care provided in correctional facilities includes both specifically care-related activities and also preventive, rehabilitative, forensic and emergency activities, based on a service package that is structured around a series of specific programmes:

- Prevention and control of HIV-AIDS.
- Prevention and control of tuberculosis.
- Prevention and control of other sexually and intravenously transmitted diseases.
- Programmes to combat drug addiction.
- Health education and disease prevention.
- Methadone maintenance.
- Detox programmes in therapeutic units.
- Social reintegration programme.
- Health, hygiene and environmental health promotion programme.
- Comprehensive care programme for the mentally ill (PAIEM).

Special mention must be made of Spain's collaboration with international institutions: recently, the WHO Regional Office for Europe[14] has requested that Spain, a member of the prison health network since 2004, become one of the Steering Group countries of this international organisation (Health in Prison Project. HIPP). This group is comprised of representatives of prison health administrations in the European Union. It was established in 2003 to promote co-operation and improvement and to make recommendations to governments regarding good practices in prison health, from within the WHO Regional Office for Europe.

7.3 Reducing gender inequalities in health

Interest in questions of gender is increasing but the study of such issues has not yet reached the health sciences, which to date have mainly focused on biology and therefore on the aspects of health that are related to sex, but not to gender.

In this regard, in Spanish legislation, ***Law 3/2007, of 22 March 2007, on the Effective Equality of Men and Women***[15] contains several articles that address the themes of education, research and health. It indicates that the various public administrations, through the Regional Health Services or other appropriate bodies, must promote scientific research that takes into account differences between men and women as regards health protection, especially in terms of access to health services, the diagnostic and therapeutic effort, clinical trials and medical care activities. Also, it underlines the need to integrate the principle of equality into the training of the personnel employed by health organizations and to put in place actions conducive to achieving balanced participation of women and men in upper-level management and positions of responsibility throughout the SNS. In addition, it must be remembered that it is important to obtain and process sex-disaggregated data from registries, surveys,

[14] World Health Organization. Prisons and health. [http://www.euro.who.int/prisons]

[15] Ley orgánica 3/2007, de 22 de marzo, para la igualdad efectiva de mujeres y hombres. [http://www.boe.es/aeboe/consultas/bases_datos/doc.php?coleccion=iberlex&id=2007/06115]

statistics and other medical and health information systems, as provided for in Art. 27 of the aforementioned Law.

Health strategies in care processes and the gender perspective

The primary objective of these strategies is to ensure excellence in health care, offering care that is more personalised, more focused on the individual needs of each citizen, be it a woman or a man, who uses SNS services. It thus becomes necessary to make every effort to support professionals in all that may contribute to such clinical excellence.

The *SNS Quality Plan*[16] establishes the following actions as high priorities in the promotion of equity: expanding knowledge about gender inequality in health and reinforcing the gender perspective in health policy.

In this regard, throughout 2009 there has been continued collaboration with the institutional committees and with the committee for the monitoring and evaluation of the SNS Strategies approved by the CISNS (on cancer, ischaemic heart disease, diabetes, palliative care, mental health, attending normal births, stroke, COPD and rare diseases), in order to identify where gender relations generate inequality and might therefore lead to inequities between men and women in the access and use of health care services, and to formulate, within each line of strategy, objectives and recommendations that will help reduce health inequalities (Quality Plan. Strategy 4. Objective 4.1).

Gender violence

Spanish Law 1/2004, of 28 December 2004, on Comprehensive Protective Measures to Combat Gender Violence called for the creation of a National Plan on Gender Violence Awareness and Prevention,[17] to serve as a common framework for action, ensuring that all stakeholders involved in the struggle against gender violence ground their work in the same basic concepts and objectives. The plan places special emphasis on the role of the public administrations.

This National Plan is comprised of seven strategic themes (justice, safety, health, social services, information, education and communication), complemented by five additional transversal themes (research and study, the training and specialisation of professionals, social awareness, coordination, evaluation and monitoring).

Similarly, the CISNS Commission against Gender Violence,[18] since its creation in September of 2004, has served as the multi-party public administration body (with the participation of autonomous communities, MSPSI and the Governmental Department on Gender Violence) which provides technical support to the CISNS in the field of gender violence and guides the planning of the health care measures provided for in Chapter III of the aforementioned Law 1/2004. The Commission evaluates and proposes

[16] SNS Quality Plan web site. [http://www.msps.es/organizacion/sns/planCalidadSNS/pncalidad.htm]

[17] Plan Nacional de Sensibilización y Prevención de la Violencia de Género. [http://213.27.203.194/ss/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobheadername1=Content-disposition&blobheadervalue1=inline&blobkey=id&blobtable=MungoBlobs&blobwhere=1244651908207&ssbinary=true]

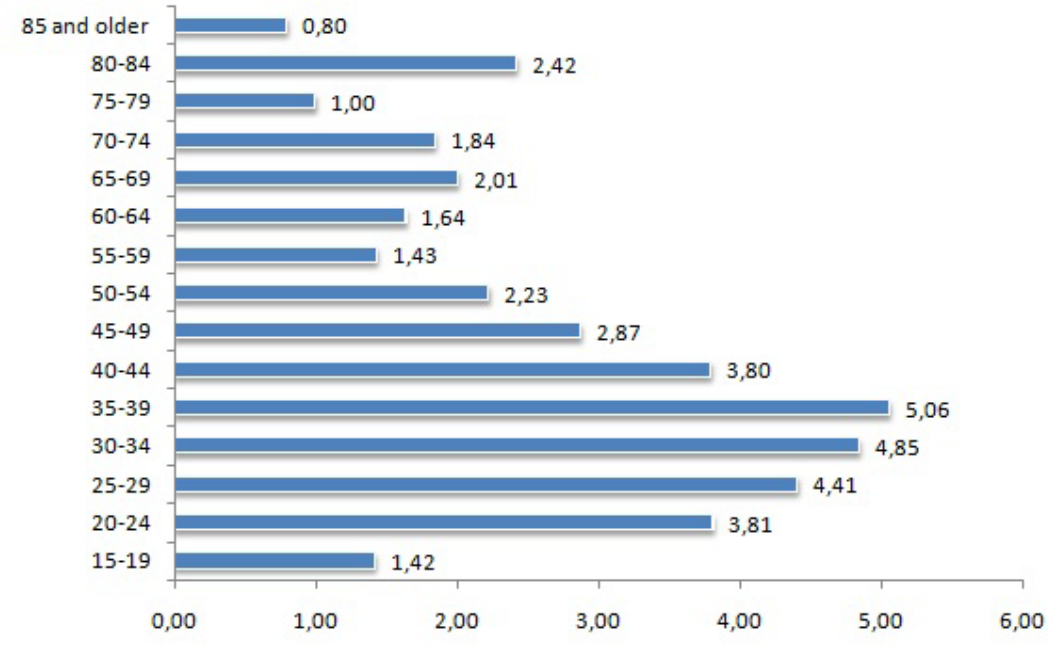
[18] Ministry of Health and Social Policy – Violence against women. [http://www.msps.es/organizacion/sns/planCalidadSNS/e02_t03b.htm]

measures needed for the application of the Common Protocol for health sector response to gender violence[19] and any other measures it deems necessary to enable the health sector to contribute to the eradication of this form of violence.

In 2009 the *Annual Report on Gender Violence 2008* was drawn up and presented.[20] This report consists of a situation analysis and a description of gender violence as the public health problem that it is.

The report includes data on the changes in the epidemic index of gender violence homicides in Spain in the 2003-2008 period, as well as age-specific frequencies and mortality rates (Figure 7.4). It also contains a geographical study by province and autonomous community (Table 7.6), in the 1998-2008 period, with a brief description of some of the groups of women especially vulnerable to gender violence, with disaggregated data by age and country of origin.

Figure 7.4 **Women's rate of death (x10⁶) due to gender violence, age specific. 1998-2008**



Source Annual Report on Gender Violence 2008. Women's Health Observatory. MSPSI.

The distribution observed in rates of death due to gender violence makes it possible to identify differences in such rates by both province and autonomous community. An analysis by age group reveals that women aged between 21 and 50 are the ones at highest individual risk of dying from this cause.

The first pilot experience in the collection of data related to the Common Indicators on Cases of Gender Violence Detected and Attended in the SNS[21] highlighted the wide variety of sources of information existing for case identification in the health care

[19] Protocolo común sanitario sobre la violencia de género. [http://www.msps.es/organizacion/sns/planCalidadSNS/pdf/equidad/protocoloComun.pdf]

[20] Informe anual Violencia de Género 2008. [http://www.msps.es/organizacion/sns/planCalidadSNS/pdf/equidad/informeViolenciaGenero2008/General.pdf]

[21] Indicadores comunes: atención sanitaria ante la violencia de género en el Sistema Nacional de Salud. [http://www.msc.es/organizacion/sns/planCalidadSNS/pdf/equidad/A4ViolIndicadoresDef.pdf]

services, and also the heterogeneity of the codification in current health information systems (primary and specialised care).

Health sector training on the subject of gender violence takes place through the ongoing training programmes that the health services organise in the autonomous communities, following CISNS Quality Criteria for the basic training of health care professionals.[22] According to 2008 data, a total of 5766 professionals attended training sessions, during which 5808 class hours were taught in a total of 430 activities. Primary care is where the highest number of activities and teaching hours took place.

Table 7.6 **Rates of death due to gender violence adjusted by age and autonomous community. 2008 (1998-2008).**

Autonomous Community	Cases	Rates x 10^6 (CI 95 %)	Autonomous Community	Cases	Rates x 10^6 (CI 95 %)
Andalucía	124	3.34	Extremadura	8	1.52
Aragón	16	2.50	Galicia	29	1.60
Asturias	13	2.50	Madrid	83	2.30
Baleares	23	4.63	Murcia	24	3.10
Canarias	47	4.50	Navarra	10	3.23
Cantabria	6	2.21	País Vasco	18	1.45
Castilla-La Mancha	28	3.27	La Rioja	5	2.27
Castilla y León	32	2.57	Ceuta	1	2.94
Cataluña	88	2.51	Melilla	2	6.42
Comunidad Valenciana	80	3.47			

Source Annual Report on Gender Violence 2008. Women's Health Observatory. MSPSI.

As regards participation by the two sexes in training activities related to gender and health, it appears that more women tend to participate in this type of training activities. This is not simply due to the fact that women occupy a larger segment of the health professions; it is also related to women's greater interest in and sensitivity to this field. This variation in participation represents a topic deserving of reflection and study (Figure 7.5).

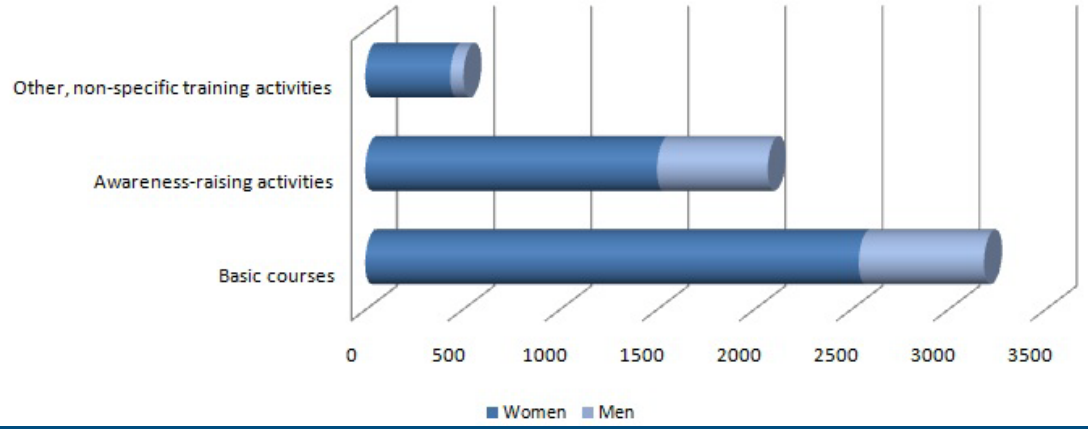
All autonomous communities have implemented their own protocols dictating the action to be taken in response to gender violence or have implemented the Common Protocol of the SNS. Also, they all offer courses on gender violence especially designed for health professionals, as well as conferences to further knowledge and awareness and to distribute informative material on the protocols so that they become better known. Table 7.7 lists the most important actions in each region.

In an analysis of public policies on gender violence around the world, involving a total of 23 European countries and 14 Latin American countries, it was found that only a few of them have put in place measures related to early detection of violence. These countries are Spain, Portugal, Sweden, United Kingdom and Norway. The latter, United Kingdom and Norway, place special emphasis on particularly vulnerable groups, such as pregnant women.

Of the sample of countries with specific plans on gender violence analysed (n=20) only 6 countries in Europe (Turkey, United Kingdom, Poland, Portugal, Spain and Sweden) and 6 in Latin America (Bolivia, Chile, El Salvador, Honduras, Mexico and Nicaragua) mention the importance of implementing measures with which to identify situations of abuse from within the health care sector.

[22] Criterios de calidad para la formación básica de profesionales: atención sanitaria ante la violencia de género en el Sistema Nacional de Salud.
[http://www.msc.es/organizacion/sns/planCalidadSNS/pdf/equidad/A4ViolCriteriosDef.pdf]

Figure 7.5 **Participation in the different training activities about gender and health. Data disaggregated by sex. 2008**



Source Annual Report on Gender Violence 2008. Women's Health Observatory. MSPSI.

Table 7.7 **Regional protocols on health sector response to gender violence. 2009.**

Autonomous Community	PROTOCOLS
Andalucía	- Creation and implementation of protocol for health sector response to gender violence (2009).
Aragón	- Creation and implementation of interinstitutional protocol to prevent gender violence and assist victims (2009). - Continued application of the Guide on health sector response to victims of domestic violence (2005).
Asturias	- Continued application of protocol to improve attention to victims of gender violence (2007).
Baleares	- Creation and implementation of protocol for health sector response to gender violence (2009). - Creation and implementation of protocol for interinstitutional response to gender violence (2009). - Evaluation of primary care and mental health care for victims of gender violence (2009).
Canarias	- Continued application of protocol for response to gender violence in domestic settings (2004). - Evaluation of the protocol and training on gender violence in primary care personnel (2009).
Cantabria	- Continued application of protocol for health sector response to domestic violence (2nd ed. 2007). - Preparation and implementation of training program for regional health service response to violence against women (2009). - School-based project for greater awareness and prevention of intimate partner violence as a health problem (2009).
Castilla y León	- Continued application of protocol for primary care response to victims of domestic violence (2003). - Preparation of a clinical practice guide for detecting and attending to victims of gender violence (2009 – 2010). - Continued screening of women aged over 14 years about gender violence (launched in 2008). - Preparation of a short guide to gender violence for health professionals (begun in 2008).
Castilla-La Mancha	- Continued application of protocol for primary care response to victims domestic violence (2005). - Continued application of mobile teleassistance programme for victims of gender violence. - Continued application of “Equalitas” programme for the reconciliation of work, family and personal life, assisting battered women (residents or ex-residents of the shelter in Talavera

	de la Reina) by providing care to their children. - Implementation of the "Vitrubio" programme (organised jointly by the Women's Institute and the professional association of psychologists) for the prevention of gender violence and intervention with men who batter physically and/or psychologically.
Cataluña	- Preparation and implementation of protocol on how to address violence against women from within the health sector in Cataluña (2009). - Preparation and implementation of programme for comprehensive care for African women who suffer or have suffered gender violence (2009). - Preparation and implementation of programme for psychological intervention at the group level, for women in situations of intimate partner violence (2009). - Preparation and implementation of programme for health sector response to gender violence, aimed at children of battered women (2009).
Comunidad Valenciana	- Continued implementation of protocol for health care response to gender violence (2008).
Extremadura	- Continued implementation of SNS protocol for health sector response to gender violence (2007). - Continued implementation of "Pilar" project for attending domestic violence victims in emergency situations and providing psychological care in a single service (2008). - Continued implementation of "Daphne III" project for health professionals working in rural settings, to help prevent and care for victims and persons in situations of risk (undertaken in 2008). - Updating of interdepartmental protocol for the eradication of gender violence (2009). - Implementation of programme on psychological intervention targeting minors and the children of victims of gender violence (2009). - Implementation of gender violence awareness programme for migrant women (2009).
Galicia	- Creation of technical guide on care process for women in situations of gender violence (2009).
Madrid	- Publication of a support guide on primary care response to domestic violence against women (2007). - Creation of short guide on primary care response to gender violence (2008). - Publication of a guide for specialised care response to domestic violence against women (2008).
Murcia	- Continued application of protocol for the detection of and response to gender violence at the primary care level (2007). - Implementation of the comprehensive plan for training in gender violence intervention (2009).
Navarra	- Continued implementation of SNS protocol for health sector response to gender violence (2007). - Implementation of protocol for health sector response to domestic violence of a physical psychological or sexual nature.
País Vasco	- Continued application of protocol for health sector response to domestic violence (2000). - Continued application of the protocol for health sector response to domestic violence and sexual violence against women (2008). - Continued application of Plan IV on the equality of women and men (2006-2010).
Rioja	- Review of SNS protocol for health sector response to gender violence (2009).
Ceuta and Melilla	- Continued implementation of SNS protocol for health sector response to gender violence (2007). - Creation of a Guide on resources available in the autonomous city of Ceuta (2009).
Source	Includes the information provided by the autonomous communities and INGESA before final reporting date for inclusion in this document.

Also of interest are the proposals made by the Center for Disease Control and Prevention (CDC), in Atlanta, Georgia and the Pan American Health Organization on the importance of epidemiological surveillance of gender violence and the specific recommendations made by these institutions regarding the quantitative information that should be registered in relation to the sociodemographic features of women who suffer gender violence, their aggressors, the characteristics of abuse and its consequences on the physical and psychological health of women. It is also very important to know the characteristics of the health care needed, in order construct indicators that are useful in the evaluation of the impact and results of the strategies and interventions taking place in different countries.

Last of all, mention must be made of Royal Decree 924/2009, of 29 May 2009,[23] which governs the granting of direct subsidies for the implementation of SNS strategies to the autonomous communities and INGESA. This piece of legislation includes an overall credit of four million Euros for the prevention of gender violence, distributed in proportion to the population of each region according to the most recent municipal register of inhabitants data published by the National Statistics Institute (INE), as provided in Royal Decree 2124/2008, of 26 December 2008.

National survey of sexual health

The Ministry of Health, Social Policy and Equality, as part of the priority action of increasing equity specified in the SNS Quality Plan, conducted a survey to generate knowledge regarding the sexual health of women and men, for purposes of identifying existing needs in terms of information and health care. This is deemed a necessity because there is very little information available in this area.

To carry out this project a collaboration agreement was signed with Spain's Sociological Research Centre (CIS). To design the questionnaire an ad hoc working group was formed with organisations and experts. The questionnaires were administered in 9850 personal interviews taking place in people's homes. The sampling points were 789 municipalities in 52 provinces.

There was also a review of the main sources of information at the state and international levels, in which the practical absence of comprehensive studies on health and sexual and reproductive rights was observed. Of the existing studies, considerable heterogeneity in data treatment by the different sources was detected.

The most novel aspects of the National Sexual Health Survey are the inclusion in the sample of all age groups from 16 and up, the holistic approach to sexuality (going beyond practices and behaviour), and the mainstreaming of the gender focus in the design of the study and in the treatment of the data obtained. This has made it possible to perform an analysis from the perspective of gender relations and their effect on sexual health and to collect information that will prove useful in interventions in the area of sexual health. The use of this theoretical framework makes Spain the first country in the WHO European Region to conduct a national survey on sexual health. Various investigations have been performed, for example in Ireland, France and Sweden, but they used a different approach.

Sociodemographic variables have been crossed with sexual practices, behaviours, motivations and feelings with regard to sexual relations, and also with people's satisfaction with their sex life and their use of health care services related to sexual health.

Training in health and gender

To improve the training offered to health professionals, ensuring that gender inequalities are addressed in ongoing training programmes, the Ministry of Health and Social Policy, in collaboration with the autonomous communities, the Women's Health Observatory

[23] Real Decreto 924/2009, de 29 de mayo [http://www.boe.es/boe/dias/2009/06/16/pdfs/BOE-A-2009-9982.pdf]

and the Carlos III Health Institute, has taught the following courses at the Escuela Nacional de Sanidad (the national school of public health) in 2009:

- Fourth edition of a course on Public Health and Gender, with the participation of personnel from the autonomous communities and Equal Opportunity Agents (people who have completed a programme on equal treatment for men and women), in collaboration with the Women's Institute.
- Fourth edition of the course Qualitative Research and the Gender Perspective in Health, in collaboration with the Women's Institute.
- Fifth edition of the training course for people who train others in preventing and responding to gender violence.
- Fifth edition of the course Preventing and Responding to Gender Violence, for mental health teams.
- Fourth edition of the course on the Gender Perspective in Health and in the SNS, for personnel of this Ministry, in collaboration with the Equality Section of the Directorate General of Human Resources of the MSPSI.

It also collaborated with the Latin American Faculty of Social Sciences and the UNESCO Chair on Women, Science and Technology, in on-line training courses on how to integrate the gender perspective in the various ways health is addressed. In addition, it collaborated with the Alcalá de Henares University in Madrid, in the master course on gender violence that it offers to health professionals.

Along these same lines, over the course of 2009, a proposal regarding basic educational contents and educational material in combating gender violence[24] was developed, to serve as documentation in support of the training of SNS professionals in terms of the health sector response to domestic violence. The proposal consists of a guide indicating the basic contents that must be covered in order to consider that suitable training has taken place in each area of knowledge. The guide will be presented to the CISNS.

Reproductive health care

The reproductive health care that the Ministry promotes aims to offer overall, continuous, comprehensive and high-quality care for the process of reproduction within the SNS. It intends to present care based on the best available knowledge, focused on individual needs and circumstances, and oriented towards achieving the most satisfying, intimate and human experience for women, their partners, newborn babies and families. A further priority is to bring about a change in social values related to maternity and paternity, which have traditionally meant enormous demands being placed on mothers and tolerance of a low degree of involvement by fathers.

The premises underlying health care related to the reproductive process differ considerably from those pertaining to other clinical procedures, since reproductive care is concerned with a healthy population during a physiological process. For this reason, respect for the natural evolution of the process must preside over all health care decisions and any intervention must be assessed beforehand, and applied only when it

[24] Training of SNS professionals in the proper health care response to gender violence. [http://www.msc.es/organizacion/sns/planCalidadSNS/pdf/equidad/materialesEducativosFormacionVG.pdf]

has been shown to be beneficial and harmonious with the needs and desires of the woman in question. The aim is to offer excellent care that is scientific and personalised, that takes into consideration psychosocial risks and specific needs, that contributes to empowering women to take informed decisions, to enhance their knowledge of the process at hand and to provide maternal and paternal preparation, offering support on a continuous basis by expert professionals.

The point of departure for addressing reproductive health can be found in the process of elaboration in 2008 of the SNS Strategy for Attending Normal Births (EAPN).[25] This process entailed participation and consensus-building among all the scientific societies, professional sectors and social and women's organisations involved in this area, through the institutional and technical committees created for this purpose.

These two committees are now in charge of monitoring and implementing the EAPN and of creating the technical document on how to approach reproductive health as a whole, which was begun in 2009.

To this end, the following working groups have been established:

— *Pregnancy, neonatal and post-natal periods.* This group's activity in 2009 focused on creating the base document for this Strategy.
— *Indicators and registry system.* In March of 2009 this group decided that basic agreed indicators should be introduced and registry systems established that allow information to be obtained and evaluations to be made of the EAPN in the SNS, in 2010.
— *Professional training.* In February of 2009 this group developed a two-part training programme: an intensive seminar and monographic workshops. Both of these activities are oriented around the training of trainers.
— *Birthing plans.* In 2009 this group reviewed the birthing plans that exist in the various autonomous communities.
— *Dissemination and implementation*. This group focuses on making reproductive health recommendations better known. It is currently beginning work on a communication plan.

Furthermore, in 2009 the Women's Health Observatory has sponsored the preparation of technical instruments to accompany the implementation of the EAPN in the SNS, in harmony with the SNS Quality Plan:

— "*Clinical Practice Guide for Attending Births"* with the methodology set forth in the publications of the Guía-Salud Project. Creation of this Guide has been commissioned to the Health Technology Assessment Agencies of País Vasco and Galicia (Avalia-T).
— "*Standards and Recommendations for Hospital Maternity Units*"[26] with a description organisational and management aspects (including quality

[25] Estrategia de atención al parto normal en el Sistema Nacional de Salud [http://www.msps.es/organizacion/sns/planCalidadSNS/pdf/equidad/estrategiaPartoEnero2008.pdf]

[26] Maternidad Hospitalaria. Estándares y recomendaciones. [http://www.msc.es/organizacion/sns/planCalidadSNS/docs/AHP.pdf]

management and patient safety), and also topics related to the planning and design of hospital units where babies are delivered.

Another development is the launch of a Best Practices Search Tool[27] to help other professionals learn about the best practices being used in the SNS and their location. This represents a significant step towards one of the objectives of the SNS Quality Plan: to put in place reproductive health policies that improve care quality and promote best practices.

Also of interest in 2009 is the funding offered by the Ministry of Health and Social Policy to the autonomous communities to be used on projects focusing on perinatal health and attending births, and on projects encouraging best practices. The allocated budget was eight million Euros.

The proposal regarding the distribution of funds for the financing of SNS Strategies[28] made by the Ministry, as recommended by the CISNS, was approved by the Council of Ministers. In addition, Royal Decree 924/2009, of 29 May 2009, regulates direct subsidies to the autonomous communities and INGESA for the implementation of SNS Strategies, with one of the subsidised areas being attending normal births.[29]

The funds are distributed in proportion to the population of each region, as determined by the most recent municipal register of inhabitants data published by the National Statistics Institute (INE), as provided in Royal Decree 2124/2008, of 26 December 2008.

Finally, some of the measures adopted in 2009 by the autonomous communities, with a view to improving the care provided to women during pregnancy, childbirth and the post-natal period, are listed in (Table 7.8). All regions have programmes or protocols on attending pregnancy, childbirth and the post-natal period, vaccination programmes and programmes to ensure proper monitoring of children's health. All of the regions also conduct training activities for health professionals and publish teaching material that gives their women's health plans a more multicultural perspective.

[27] Buscador de buenas prácticas de salud reproductiva (MSPS).
[http://www.msc.es/organizacion/sns/planCalidadSNS/osm/BBPP/frmBBPP.jsp]

[28] Press release: The government distributes over 26 million Euros for the implementation of health strategies in the autonomous communities.
[http://www.msps.es/gabinetePrensa/notaPrensa/desarrolloNotaPrensa.jsp?id=1771]

[29] See footnote 17.

Table 7.8 Steps taken by the autonomous communities towards the implementation of plans and programmes on care for women and attending normal births. 2009

Andalucía
- Continuation of programmes on pregnancy, childbirth and post-natal period; vaccination; and childhood health, initiated in 1985.
Aragón
- Organisation of "Best Practices" training visits to reference hospitals for health professionals (3 rotations). - Continued action on the “Women's Health Plan” and constitution of an Advisory Board on Women's Health by virtue of Decree 115/2009, of 23 June 2009. - Continued functioning of Commission, co-ordinated by the Aragón Women's Institute, to co-ordinate and monitor interdepartmental protocols regarding female genital mutilation.
Asturias
- Start of “Attending normal births survey” 2009-2010. - Continuation of actions in promotion of breastfeeding and of healthy pregnancies 2008-2010. - Actions related to the programme "Bio-psychosocial care for women" 2009-2011.
Baleares
- Actions to encourage co-responsibility and family participation in neonate units. - Incorporation of multicultural perspective to breastfeeding guide, translated into various languages.
Canarias
- Creation of protocol for attending normal births. - Training courses for trainers on “SNS Strategy for attending normal births” and training in gender issues for primary care midwives. - Creation and distribution of a DVD on good and bad praxis in relation to "Strategy for attending normal births". - Publication of "Guide to becoming parents" using gender-sensitive approach and including didactic materials.
Cantabria
- Continued implementation of “Strategy for attending normal births” 2007-2010 - Continued implementation of "Action Plan for Women's Health" 2008-2010.
Castilla y León
- Study conducted for the application of the “Strategy for attending normal births.” - Application of new techniques in attending normal births at Hospital Clínico Universitario de Valladolid. - Training courses for professionals on “Strategy for attending normal births.” - Preparation of “Comprehensive Plan on Caring for Women's Health,” pending approval.
Castilla-La Mancha
- Monitoring of regional action plan in relation to childbirth and promotion of breastfeeding 2004-2009.
Cataluña
- Continuation of programme for natural care in normal childbirth in Cataluña 2005-2009. - Continuation of programmes on smoke-free pregnancy, adolescent pregnancy, emergency contraception, prenatal diagnostic brought forward to the first trimester, promotion of breastfeeding. - Reedition of the guide for pregnant women, pictorial material for pregnant women in especially vulnerable groups, didactic material on becoming a mother and clinical guide for the promotion of alcohol-free pregnancies.
Comunidad Valenciana
- Application of Art. 4 "Rights related to childbirth” of the regional Law 8/2008 on the health rights of children and adolescents. - Monitoring of activity 6.2 “Better care for pregnancy and childbirth” of the Plan for Excellence in Valencia's Health Service 2005. - Monitoring and evaluation of specific objective 4 (in the area of intervention in perinatal health) of the Regional Health Plan 2005-2009. - Monitoring of the SNS Strategy for Attending Normal Births, initiated in 2008. - Creation of Regional Strategy for Attending Normal Births. - Monitoring of programme to promote health of mother and child 2006-2009.
Extremadura
- Creation of expert committee on attending normal births in Extremadura. - Preparatory work on protocol for attending normal births, in-hospital postnatal care and newborn care. - 1st conference (one day) to study current approach used in childbirth. - Participation in training programme for professionals, organised by Women's Health Observatory. - Training activities on attending normal births.
Galicia
- Introduction of SNS Strategy for Attending Normal Births.

-	Intensive seminar on perinatal health and attending births.
-	Short training visits in "Best Practices in Childbirth" organised at Spain's reference hospitals and promotion and support for breastfeeding at Hospital Comarcal de O Salnés (a Child-Friendly Hospital)
-	Courses on childbirth and in-hospital postnatal care, postnatal care in primary care settings, promotion and support for breastfeeding, baby massage for professionals, advances in family-focused neonatology. Kangaroo care and milk banks.
-	3rd conference (one day) on perinatal health and attending births.
-	Creation of pictorial sequence to improve communication with pregnant immigrants and a poster promoting breastfeeding in relation to Influenza A (in collaboration with the regional federation of breastfeeding support groups).
Madrid	
-	Training courses for breastfeeding consultants.
-	Implementation of project to promote breastfeeding in primary and specialised care.
Murcia	
-	Continued application of project on attending normal births, launched in 2007.
Navarra	
-	Informative day-long conference on degree of fulfilment of Strategy for Attending Normal Births in Navarra.
-	Design of training workshops for professionals.
País Vasco	
-	Continued actions in relation to safety in the childbirth process and post-natal period.
La Rioja	
-	Support for breastfeeding by means of distribution of the guide "Breastfeeding: what you should know about nursing" for mothers and fathers, and of information about the support group "Al HALDA."
-	2nd conference on breastfeeding, including workshops on baby massage and baby-carriers.
-	Creation of "Protocol for breastfeeding" designed for health professionals.
-	Design of a study on prevalence of breastfeeding in the region.
-	Creation of a working group for midwives in primary and specialised care for the creation of a guide on attending normal births.
Ceuta and Melilla	
-	Conference on normal childbirth "Women's participation and empowerment" for health professionals and immigrant patients, with participation of midwives from Morocco and Gibraltar.
-	Distribution of DVD on attending normal births (cephalic presentation) for professionals.
-	Distribution of DVD on natural childbirth for mothers-to-be.
-	Introduction of microbiological tests during pregnancy in Ceuta.
-	Introduction of Guide on prevention of congenital malformations.
Source	Includes information provided by autonomous communities and INGESA before final reporting date for inclusion in this document.

8 Clinical Information Management in the SNS

8.1 Electronic Health Records in the SNS

Advances in 2009

The results of the agreements made and proposals put forward by the working groups formed in 2007 and 2008 became visible during the first half of 2009 thanks to the effective launch of the pilot test phase (with the probability of real exchange of information) in two autonomous communities: Baleares and Comunidad Valenciana (with La Rioja joining at the end of the year) and also as a result of Spain's joining the *International Health Terminology Standards Development Organisation* (IHTSDO) in April.

As explained in the SNS Annual Report for the year 2008, the stated purpose of the pilot phase of the EHR-SNS (Electronic Health Records in the SNS) project was to test the viability of the model designed and identify the areas in need of improvement, while at the same time performing the tasks necessary to achieve full interoperability in the EHR-SNS system.

To make this possible, the various working groups finished the document production process that had been underway throughout the preceding year, having prepared instruments of crucial importance to the pilot. As of December 2009, the situation was as follows:

— **The working group on standards and technical requirements (GERT),** after reviewing the technical design of the EHR-SNS system, drew up a consensus document outlining a standards policy for the SNS in coming years and also describing the technical proposal for the pilot testing.[1]

— **The advisory group on semantic interoperability in the EHR-SNS (GAISHC)** presented its recommendation in favour of the use of SNOMED Clinical Terms® for patient summary variables and the proposal on obtaining OID (object identifiers) for and within the SNS, which is vital for the positive identification of objects exchanged in the EHR-SNS system. This group also drew up a road map laying down the strategy to be followed in achieving semantic interoperability.

It was in this context that the Ministry of Health and Social Policy assumed the role of national reference centre for the SNOMED CT and in the month of September it set up a semantic resource area on its website to disseminate and facilitate public access to this resource, especially within the SNS. This area is now distributing the international version of SNOMED CT exclusively and free of charge within Spanish territory.

[1] To see this document, go to: [http://www.msc.es/profesionales/hcdsns/contenidoDoc/documentacion.htm]

— **The group of autonomous communities involved in the pilot testing of EHR-SNS (GCPHC)** has fulfilled its assigned task of periodic monitoring and incorporating improvements into the pilot system. It also approved an evaluation method based on identifying usage patterns and user behaviour. This method distinguishes between two areas: the system itself and the perceptions of the end users. The first area includes system activity (number of accesses and distribution of accesses by type, autonomous community, reports), response times as measured at various points along the continuum that goes from identification of the professional to the extraction of the document or image, and finally, the analysis of the alerts generated automatically (by the system itself) or manually (by its users). The impression that users have of the model's usefulness and ease of use is evaluated by means of electronic satisfaction surveys (included in the application) and a feedback/complaint procedure.

In 2009 the MSPSI focused its efforts on the execution of the pilot test phase, proposing strategies to the participating autonomous communities to increase the volume of access by professionals to the clinical information of real patients, either by broadening the test scenarios involved to include the entire autonomous community, or by incorporating other autonomous communities to the pilot test, or by motivating the participating professionals to use the system more or by integrating local applications into the EHR-SNS application.

It is worthwhile to mention here the many lessons learned. The learning experience, along with the considerable effort made in terms of documentation and instrumentation by the MSPSI technical teams (Sub-Directorate of Information Technology and the EHR-SNS Project Team) and the working groups mentioned above, for the successful cases of the three autonomous communities mentioned above, was based on a rigorous and proactive approach, requiring that work be focused on deployment in the health facilities, on dissemination and training for end users, on the generation of clinical notes, especially patient summaries, on the expansion of scenarios to include a much higher percentage of population than the initial estimate, on migration to the MSPSI web application designed for this purpose, on the refinement of references and improving the coding of facilities-services and on enhancing their own regional systems.

Institutional support and allocated resources

Phase I of the Health Care Online programme, included in the SNS Avanza Plan, ended in 2008, with the objectives having been met. In 2009 Phase 2 of the Health Care Online programme began, further progressing along the path towards the goal of making the health information associated with each citizen available from any point within the SNS. To this end a series of trilateral agreements were signed (by MSPSI, Red.es and the autonomous communities) in which each party committed to meeting the objectives specified and making the necessary investment. These agreements include provisions regarding the funding of actions aimed at promoting the EHR-SNS system and e-Prescription in each autonomous community, with full implementation at the functional and territorial levels.

For this second phase of the Health Care Online programme, for the 2009-2012 period, the central government has allocated €93,651,597 and an additional €8 million for

the Central Node, or data centre, which makes for a total of €101,651,597. Of this amount the MSPSI furnished €46,643,947 (this figure includes the actions in the Central Node).

The trilateral agreements between the MSPSI, Red.es and the autonomous communities also establish which actions will be co-financed with these funds, along with the funds provided, in each case, by the autonomous community. All of the autonomous communities signed, in the last quarter of 2009, this type of agreement, which makes the contribution of the autonomous communities an additional €93.6 million over the amount furnished by the central government.

Great importance is attached to the signing of these agreements because it represents the integration of efforts by the central and regional governments. It is expected to be extremely useful in the deployment of the EHR-SNS system following the pilot testing, as indicated by the fact that such deployment is one of the three objects of the agreement and also by the fact that the agreement's provisions reinforce the systematic work of 2008 and 2009, making it a binding obligation for the autonomous communities to fulfil the technical requirements that will guarantee EHR-SNS and e-Prescription interoperability. This obligation will be enforced by means of an evaluation system *"consisting of tests defined for this purpose by the MSPSI."* It must be noted that Clause 8 specifies that failure to meet these requirements may result in *"the suspension of investments until such situation is remedied,"* if the monitoring commission so decides.

Table 8.1 Projects presented by the autonomous communities in the framework of Health Strategies 2009 – Information Systems – Item 454 Interoperability.

AUTONOMOUS COMMUNITY	NAME OF PROJECT
ANDALUCIA	Interoperability Diraya – standardisation of interfaces and services.
ARAGÓN	Adaptation of clinical notes of the regional health service to the model proposed by the SNS.
ASTURIAS	Information Systems (INTEROPERABILITY).
BALEARES	Interoperability of Electronic Records.
CANARIAS	Implementation throughout the region of the interoperability project DRAGO-AP / electronic health records of the SNS.
CANTABRIA	Interoperability of clinical information.
CASTILLA Y LEÓN	Contracting of analysis and development services for the expansion of the web application supporting the EHR of the health areas in Castilla y León (EHR-CyL) .
CASTILLA- LA MANCHA	Exchange of clinical information through the EHR-SNS Project.
CATALUÑA	Shared Clinical Record of Cataluña linked with the EHR of the SNS.
	Interoperability of the Digital Medical Image.
COMUNIDAD VALENCIANA	EHR-SNS
GALICIA	Implementation of functional and technical requirements for the integration of the regional EHR project (IANUS) with the EHR-SNS project.
MADRID	Development of pilot system for interconnection of data with the Ministry of Health, according to EHR-SNS specifications.
MURCIA	Improvements in interoperability processes between regional system and the EHR-SNS.
RIOJA	Extension of SNS electronic health records – clinical information interoperability.
CEUTA and MELILLA	Optimisation and increased security of existing information systems.

Source: Autonomous Community Annual Reports – Projects 2009. Directorate General of Professional Regulation, Cohesion in the SNS and Executive Inspection. Ministry of Health, Social Policy and Equality (MSPSI).

Since 2008 the EHR-SNS system has been included in the line of funding dedicated to information systems within the Health Strategies financed with cohesion funds. For the

years 2008 and 2009 the MSPSI allocated a total of €13,925,500 to actions undertaken by the autonomous communities towards the implementation of the functional and technical requirements stipulated in the design of the EHR-SNS, and also to actions aimed at facilitating the generation of the electronic documents comprising this system.

Finally, it must be noted that all the autonomous communities that have had access to 2009 funds for the development of the Health Information System, with the criteria set by the CISNS in its plenary session of 26 November 2008, more specifically, in the item of interoperability, have carried out projects related to the development and introduction of EHR-SNS, as shown in Table 8.1.

8.2 The epSOS Project

The epSOS Project (European Patients – Smart Open Services) is one of the European projects that, co-funded by the European Commission, focuses on achieving cross-border interoperability in Europe by conducting a large scale pilot of patient summary and e-Prescription services. Its intention is to determine the best methods and means to ensure secure access to a patient's most relevant clinical information by European health professionals who provide care to citizens needing it outside their countries of residence, with particular interest in situations of unplanned or urgent care.

This project, in which 12 Member states with a total of 27 beneficiaries take part, began its activities in July of 2008. Its work has continued throughout 2009 and has included the following:

- Incorporation of two more autonomous communities (Comunidad Valenciana and Baleares) that will furnish important scenarios for the pilot phase, in both patient summaries and e-Prescription. Their participation is channelled through the Ministry.
- Tasks related to the evaluation plan, the evaluation of the services described and the scalability of the proposals. All the Spanish participants have contributed very actively to these areas of work.
- Improvements in the epSOS website and making greater use of it in efforts to inform the population about the project.
- The preparation of the framework agreement the Member states will have to sign in order to participate in the pilot.
- The final agreement regarding the functional documents related to patient summaries and e-Prescription, in which Spain played a major role. Also, work began on the technical design of these projects. A high degree of co-ordination between the technical and functional teams has proven necessary in order to put the agreements into operation and incorporate technical proposals. The functional description groups have therefore remained active so as to be able to respond to unforeseen problems arising during development.
- Preliminary work on semantic interoperability, beginning with the description of the structure of the documents (CDA-Clinical Document Architecture) and the selection of the terminologies necessary to cover the fields defined by the functional groups. Regarding this last point, definition of a catalogue of

subsets of terminologies (Master Value Catalogue) began in 2009 and will continue in 2010.

— Release of documents on identification and on the security policy of the epSOS Project.
— Definition of pilot scenarios. The United Kingdom and the Netherlands will not contribute pilot scenarios. Germany, as of December 2009, is still clarifying how it will adapt its system to epSOS requirements. The other nine countries have defined and presented their scenarios over the course of the year. The possibility of defining scenarios as only issuers or recipients of information is approved.
— Collaboration with other European projects (Stork, Calliope…)

The synergy of the foregoing efforts and interventions, on both the national and the European level, will become evident over the next year, when the results of the pilot tests (national and European) start to become available. The results will allow for operative conclusions regarding the viability and complexity of extending technical and functional advances for the purpose of providing co-ordinated and global services to citizens.

8.3 The Central Node of the SNS

The SNS Central Node, the main data centre, is the hardware and software infrastructure that facilitates the exchange of information (both administrative and clinical) among the different SNS agents: MSPSI, autonomous communities, insurance mutuals and other relevant bodies, such as the Social Security Treasury Office and the Ministry of Justice.

It is a technological solution, developed and operated by the MSPSI, that enables vertical projects to be carried out, with a view to making the current decentralised map of competencies compatible with the ever greater need to ensure care continuity for a population with growing mobility (for work and personal reasons), both within Spain and at the European and even global levels, as demonstrated by the Google and Microsoft initiatives in this area.

The MSPSI is responsible for maintaining the capacity, availability and security of the network and its associated services for use by the SNS. The objective is to help improve the health care services, regardless of the location from which the SNS is accessed or the citizen's place of residence. Such improvement is the result of the care provider being able to access, in a timely and appropriate fashion, information that belongs to the systems of other providers and yet is important for providing appropriate care, from either the clinical or the administrative perspective.

This Central Node of interconnection within the SNS, which implements a complete service-oriented architecture (SOA), will also host the services that allow for the exchange of information with the systems of third countries, in relation to the identification of patients, their patient summaries and their e-prescriptions.

The Central Node will act as a bridge between the participating regional health services and the rest of the organisations taking part in this ambitious European undertaking, the epSOS project. On the one hand it will allow the health information of our citizens (patient summaries and e-prescriptions) to be interlinked and accessible to other project participants who may need it, provided the patient gives his/her consent. It

will also allow relevant information to be received by health professionals at Spanish health care services taking part in the pilot and who provide care to patients from other organisations also participating in the project.

This project began to operate in July of 2008 and involves 12 countries with a total of 27 beneficiaries, which include the ministries of health of most of the participating countries, along with regional institutions and other relevant bodies. It is foreseen that the system will be in development over a period of three years and that it will operate in pilot phase for at least one full year.

Foundations of the SNS Web services

Communication between the different autonomous communities and the MSPSI takes place through the Health Intranet. This infrastructure (which has been in operation since 2003) constitutes a private communication network which authorises access to its services only to the agents involved in the transactions. It is able to guarantee the high levels of security, availability and quality required by such services because of their criticality.

The SNS Web services are what enable information to be exchanged between the systems already existing in the autonomous communities, which may be different or even incompatible, with no need to unify applications or install interfaces one by one among the different agents. The exchange of information takes place through XML messages, which allows for the independence of the platforms and of the technology used by each of the autonomous communities.

This architecture also makes new services possible, such as the exchange of e-prescriptions, with no need for all the regions involved to have the same applications, to develop the same elements or to move forward at the same pace. The aim of it all is to reconcile the different priorities set by each SNS agent in terms of development and at the same time allow a service to be launched in the system as soon as various agents are prepared for it, with relatively easy incorporation of the other agents as they become ready. This method entails considerably less effort than the other options.

The SNS Services that have been developed and are currently in operation are the following:

— Database of individual health card users.
— Cohesion Fund (programmed referral of patients to reference hospitals).
— Living will registry.
— Registry of health professionals.
— Processing of invoices from dispensing pharmacies and pharmaceutical monitoring.

In the near future new SNS Services (some of which are already in the pilot phase) will be incorporated, such as e-prescriptions, electronic health records, etc. In fact, the exchange of electronic health records is now being piloted, with complete functionality, between two autonomous communities. Another autonomous community is participating in the pilot with reduced functionality and the incorporation of three more autonomous communities is set to take place in 2010.

Service-oriented architecture (SOA)

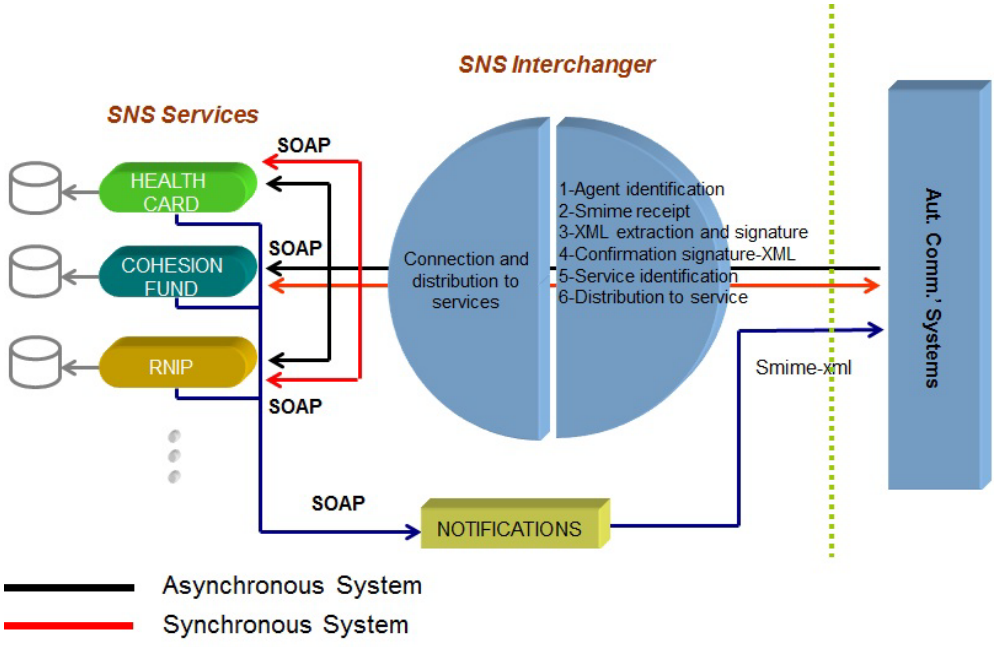
As part of the process of technological advancement taking place in the MSPSI, the aim of greater efficiency and quality in system development has led to the adoption of a service-oriented framework.

The implementation of a service-oriented architecture (SOA) in the SNS enables the building of composite applications. Newly incorporated applications make use of older ones, reusing functionalities that have already been implemented (for example: security, signature, etc.) thus avoiding the existence of isolated information silos and significantly reducing the time needed to implement new developments.

Within the SNS Central Node different types of services can be identified. Some are accessed through a private network – the Health Intranet – and others are accessed through Internet, always depending on the degree of criticality and sensitivity of the information involved.

When using the Health Intranet, the SNS Interchange is the nexus connecting the different agents (autonomous communities, other SNS agents, etc.) that interact with the SNS Services. The Interchange implements the security layer of the Central Node by verifying the authenticity of the agents that connect, the validity of the certificates they use to identify themselves, the signature of the messages received and the structural validity of the XML messages exchanged, to subsequently pass the XML messages along to the corresponding SNS Services, as shown in the figure below (Figure 8.1):

Figure 8.1 **XML messaging sequence for accessing SNS Services.**



Source Internal sources.

Depending on the needs of the particular SNS Services involved, the Interchange allows message treatment to be either **synchronous** (in the case of data entry, accessing

information, etc.), or **asynchronous** (services such as notifications, data modifications, deletions, etc.). The latter can be *queued* and their treatment deferred to a later time, when there is a reduced workload, depending on the system's needs.

The SNS Services, once they have received the XML messages through the Interchange, carry out the business processes corresponding to the Service (access to database, generation of reports, running of work procedures, etc.)

The volume of messages exchanged for these Services is high; in 2009 it was an average of over 350,000 messages per day. This figure is expected to almost double by the end of 2011, due to the incorporation of new agents and services and also due to increased use in regions in which it is already in place.

The Central Node uses Internet for SNS Services involving functions that have fewer restrictions in terms of time, availability, security and synchronization. Especially significant are the applications related to pharmaceutical invoicing and the one used for pharmaceutical monitoring (SEGUIMED), a project still in preliminary stages but that will ensure the future traceability of pharmaceutical packages. The SEGUIMED application is intended to monitor the distribution of pharmaceuticals, so as to avoid potential shortages and collaborate in locating pharmaceuticals in the event of health alerts that entail products being withdrawn or blocked from the market.

Unlike the Services accessed by the Health Intranet, these Services receive and process a low number of messages (a few hundred per day), but they tend to be much larger (dozens of MB), thus generating an average of several million transactions every day.

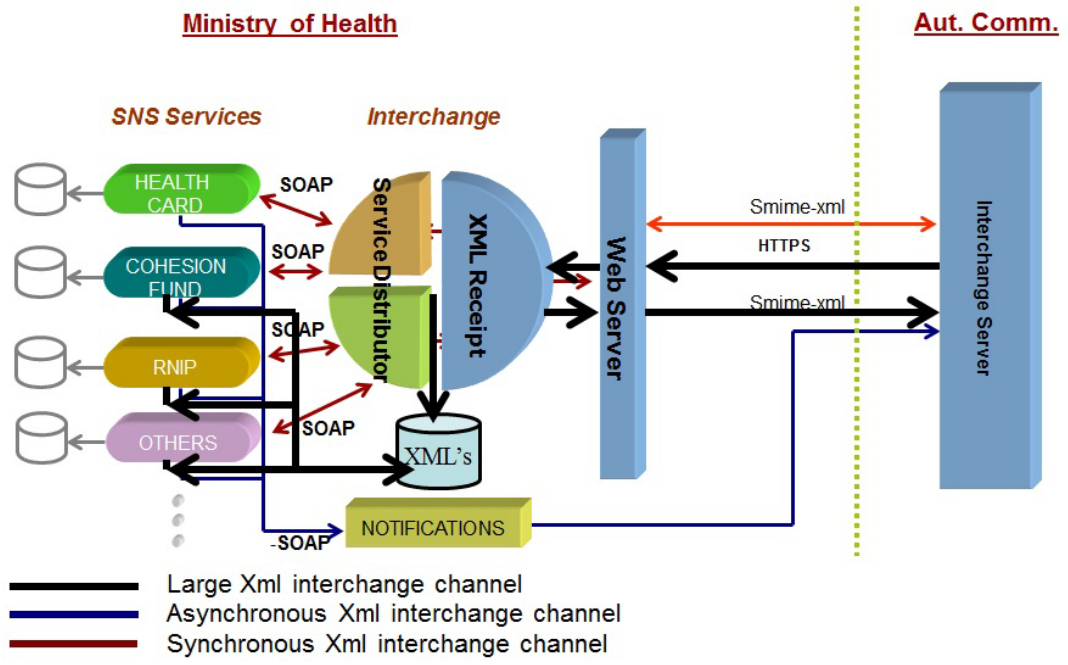
To give an idea of the activity index of these Services, in August of 2009 a total of 1140 transactions travelled through this infrastructure, including pharmaceutical invoicing, the monitoring of pharmaceutical distribution and the services accessed by the Health Intranet.

Technical solution

Initially all the solution's components were developed directly in JAVA, mainly because of the lack of maturity of existing commercial products and the shortage of economic resources (the Ministry of Health is the second to last ministry in terms of technology budget; see the REINA report by the Ministry of Public Administrations). However, in recent years there has been a progressive migration towards commercial tools that allow us to focus our efforts on developments specific to our area, while also enabling us to respond to new requirements with greater speed and flexibility (instead of taking months, developments may take weeks). This migration was accelerated and completed recently thanks to funds made available by the SNS Avanza Plan.

In the implementation of SOA, the MSPSI has made use of an integration tool (EAI) and a process modelling tool (BPM). These tools give the Ministry greater agility in the developments related to the SNS Services, endowing them with robustness and scalability, and with adequate failure tolerance. This is the result of the wide range of control mechanisms they include for achieving integration between systems outside of our organisation. Since they are service-oriented products, all the processes generated can be called *Web services* with no need to perform any task other than defining them.

Figure 8.2 SNS Interchange: general diagram of how it works.



Source Internal sources.

The processes implemented in the different SNS Services are stateless, which gives the services greater scalability and better performance.

The integration architecture is star shaped. In other words, access to the SNS Services involves mediation by the Interchange, which receives the messages sent by autonomous communities, authenticates the community sending it, validates the signature of the messages received, extracts the XML and forwards it to the corresponding Service.

Depending on the needs of the SNS Services, the Interchange allows for either synchronous or asynchronous access.

For other, more process-based applications, a process modelling tool (BPM) is used, which takes advantage of the positive features of the SOA already in place. This tool improves business processes, because it is aimed directly at the people in charge of such processes and also provides a complete vision of the process, thus allowing users to maintain a suitable degree of control throughout.

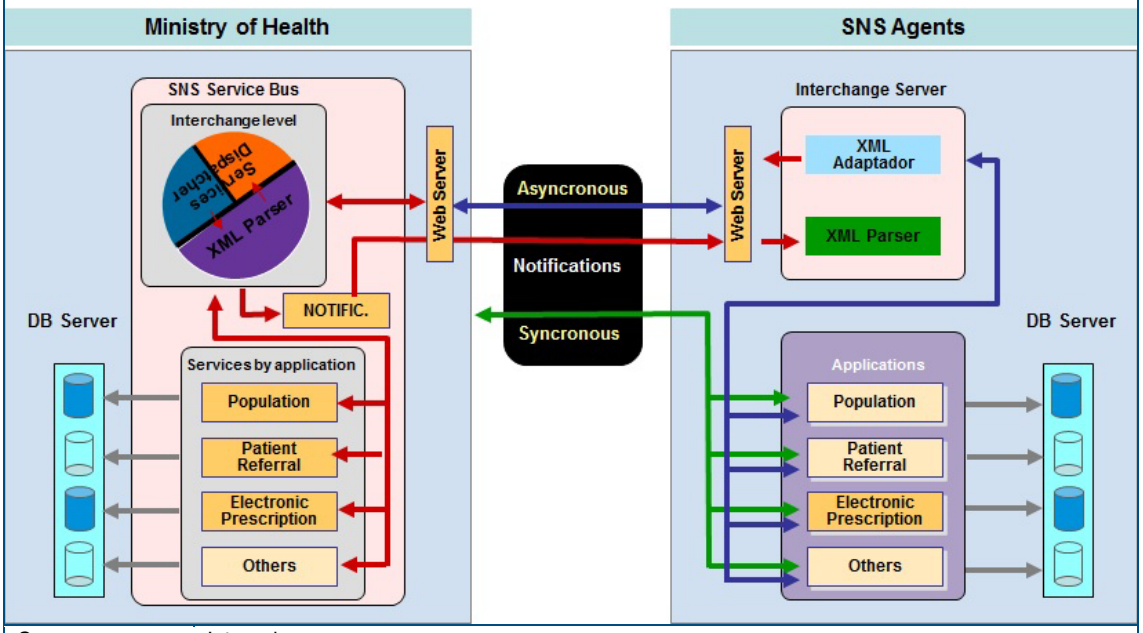
Recent activity

When an SOA initiative is implemented and different application services are made accessible via Web services within the organisation, the services must be governable, so that they can be reused, controlled and monitored at all times. When the Web services become more numerous, it becomes necessary to use a tool that allows for centralised management, performance monitoring, adequate security levels during use (availability control, localisation, software problem diagnosis, etc.).

MSPSI is currently implementing a corporate service bus (ESB), a tool that permits the SOA puzzle to be completed. The implementation of this tool makes it possible to avoid point-to-point connections among different applications, which can be a major source of problems.

An important factor in making this decision was that the bus offers the possibility of being proactive in detecting and solving problems within the Interchange node itself. Up until now these control mechanisms had to be embedded in the code, which generated a number of problems in maintenance, versioning, reusability, etc. When they are integrated into a commercial tool, many of these problems disappear and efforts can thus be devoted to the development and control of the services in our area, continuing along the path of putting our always limited resources to work on the issues of greatest value and specificity.

Figure 8.3 **Communication between SNS central node and regional agents.**



Source Internal sources

The future of the SNS Central Node

In addition to the foregoing, as the system incorporates new services and agents, considering their high degree of criticality and sensitivity, it becomes increasingly necessary to instil confidence regarding our services in other SNS stakeholders (many of which are outside our organisation). Therefore over the past four years we have been working on obtaining external certifications that demonstrate that our organisation adheres to best practices in the delivery of this type of technological service.

More specifically, the MAGERIT methodology was used to conduct an in-depth analysis of the system and put in place a complete risk management procedure in the organisation. This, along with an audit concerning ISO 17779 and personal data protection, has led to the preparation of a comprehensive plan for security and business continuity, and also a series of actions that needed to be undertaken in the organisation

in order to implement an ISMS (Information Security Management System) and obtain (at the end of 2008) ISO 27001 certification. Currently a great deal of effort is devoted to the ongoing improvement process associated with annual recertification (obtained every year since), as well as to expanding the scope of certification.

Prompted by the business continuity plan and with the aim of giving the Node the robustness it needs in its operations, and taking into account the importance of the services that are starting to be included, the Node's entire hardware and software infrastructure has been made fully redundant. Additionally, a back-up data centre equipped with redundancy, backup and data synchronisation systems has been created.

The back-up centre is designed in such a way that information is synchronised at all times in both locations, in the corresponding data storage areas, so as to be able to provide the following services:

— Critical data and system backup that enables service recovery in the case of total disaster in the main central processing unit (CPU).
— Critical data backup in the case of partial failure (of one or more services not recoverable in the main CPU within the time stipulated in the activity's continuity plan)

The SNS Services available through the back-up CPU amount to 80% of the principal node, with all the communication connections being fully redundant, so that it is possible to provide a service, albeit somewhat degraded, that still meets the needs of the processes it supports, in the case of either disaster or non-recoverable partial failure.

At the same time we are engaged in two certification processes that complement the management of the service architecture described above, which has become the core of our activities:

— Management and operation of the technological resources that support these services: ITIL (ISO 20000)
— CMMI Level 3 (ISO 15504) for our integrated development process

Finally, the recent incorporation of MSPSI to the IHTSDO and the commitment to the development and implementation of SNOMED-CT that membership in this organisation entails, has motivated us to work on the implementation of syntactic and semantic standards in the aforementioned projects, which will put Spain on equal footing with the countries around it, attaining a considerable degree of synergy between the national projects and the European projects in which the SNS is currently taking part.

Conclusions

Over the last seven years the MSPSI has developed, in conjunction with other SNS agents, interoperability services between systems, thus enhancing partnership activities between different and complex organisations, expanding the accessibility of information and facilitating the future exchange of clinical information between Spain's regional health services and other health systems in the European Union.

SOA is the technological framework that has been used in this endeavour, although none of it would have been possible had it not been for the enormous effort of a small

group of people very dedicated to the world of health care, and the support of all the parties committed to the SNS and its continuous improvement.

9 Professional regulation and the training of health care personnel

9.1 Professional regulation

In 2009, work in the area of professional regulation continued to be devoted to human resource planning, particularly as regards the need for specialists, as this is one of the biggest challenges in ensuring the continued availability of quality health care. The then Ministry of Health and Social Policy also assumed competency for the recognition of professional qualifications obtained in other EU member states, as provided in Annex X of Royal Decree 1837/2008[1] of 8 November 2008, which transposes Directive 2005/36/EC, of the European Parliament and of the Council, of 7 September 2005, into national law.

Planning for specialist needs

In March of 2009, at the extraordinary session held by the Interterritorial Council of the SNS (hereinafter CISNS), the report "Medical Specialist Supply and Needs in Spain (2008-2025)" was presented.[2] At the proposal of what was then the Ministry of Health and Consumer Affairs, the CISNS resolved to:

1. Develop strategic tools with which to plan for future needs, such as a:
   - National Registry of Health Professionals in public and private health care, and of doctors who perform tasks not related to care provision. In 2009, the autonomous communities of Valencia, Murcia, Canarias, La Rioja and Extremadura put in place regulations concerning the Registry of Health Professionals, thus joining Andalucía, which had done so in 2008.
   - Biannual update of the study on specialist needs.
2. Study, with the autonomous communities, the definition of standards regarding existing and future specialist needs.
3. Adjust the number of places in undergraduate medical studies and in the post-graduate specialist training system (MIR) to estimated needs in Spanish health care.
4. Make the specialist training system more dynamic, developing a basic common training pathway for various specialties and also a new map of specialties.
5. Extend e-Health tools to make the health system more efficient.
6. Promote the return of specialists to care activity, through retraining programmes and other measures.

[1] Royal Decree 1837/2008, of 8 November 2008. [https://www.boe.es/boe/dias/2008/11/20/pdfs/A46185-46320.pdf]

[2] New training programmes published in 2008 http://www.msc.es/profesionales/formacion/guiaFormacion.htm:

7. Develop strategies to increase the loyalty of professionals, such as making the Professional Career programme compatible across different autonomous communities, through a cross-party Pact on Health.
8. Adopt the Royal Decree that implements Art. 18 of the Law on the Regulation of the Health Professions, on the professional recognition of doctors from outside the EU whose degrees have been validated.
9. Propose to the autonomous communities that general actions be taken to improve the reconciliation of work and family life of health professionals.
10. Create the Return Office for Spanish health professionals currently working abroad. It began to function at the end of 2009, to facilitate the return of Spanish health professionals living and working elsewhere but who would like to work in Spain. Registration takes place by electronic means and the professionals then receive job offers from the various regional health services electronically.

Recognition of the qualifications of health professionals

In September of 2009, what was then the Ministry of Health and Social Policy assumed competency for recognising professional qualifications obtained in other EU member states, for the practice of the following professions regulated in Spain: medicine, pharmacy, dentistry, nursing, physical therapy, speech therapy, nutrition, optometry, podiatry, occupational therapy and veterinary medicine, as well as the additional Health Sciences specialties mentioned in Annex 1 of Royal Decree 183/2008 of 8 February 2008 (http://www.boe.es/boe/dias/2008/02/21/pdfs/A10020-10035.pdf).

This recognition has been adapted to the administrative procedure laid down in the Services Directive and the Internal Market Information (IMI) system. In the final quarter of 2009, approximately 1000 applications were received, of which 300 were related to speech therapy, optometry, occupational therapy and physical therapy.

9.2 Specialised health care training

Specialised health care training programmes

Over the course of 2009 and as provided in Art. 21 of Law 44/2003 on the Regulation of the Health Professions, the following specialty training programmes in the Health Sciences were updated and adopted:[3]

— Medical specialties:
  - Anatomical pathology: Order SAS/1351/2009, of 6 May 2009.
  - Obstetrics and gynaecology: Order SAS/1350/2009, of 6 May 2009.
  - Rheumatology: Order SAS/2855/2009, of 9 October 2009.
  - Digestive system: Order SAS/2854/2009, of 9 October 2009.
  - Ophthalmology: Order SAS/3072/2009, of 2 November 2009.

[3] See footnote 2.

— Nursing specialties:
  - Occupational health nursing: Order SAS/1348/2009, of 6 May 2009.
  - Obstetrical-gynaecological nursing (midwifery): Order SAS/1349/2009, of 6 May 2009.
  - Geriatric nursing: Order SAS/3225/2009, of 13 November 2009
— Psychology specialties:
  - Clinical psychology: Order SAS/1620/2009, of 2 June 2009.

Progress of work on common training pathways

Throughout 2009 a working group linked to the Human Resources Commission of the SNS worked to define the basic structure and organisation of common training pathways for training in the Health Science specialties, and to identify the generic and specific competencies that must be acquired by the specialists receiving such training.

Accreditation of teaching centres and units for specialised health care training

The teaching accreditation procedure underwent a considerable change at the end of 2009, a consequence of the development of the website "Accreditation of Teaching Centres and Units.[4]" This website constitutes a point of reference for the normalisation of the various types of applications seeking accreditation and it also facilitates information exchange between the regional ministries of health and the national Ministry. Its contents include: the accreditation requirements applicable to the different units that offer training in Health Science specialties, the general application form for accreditation and the new application form for the accreditation of new teaching centres, which has been updated and now has an electronic format.

In 2009, 539 new accreditation applications were processed and 341 of them received accreditation. Five of them are new teaching centres that are engaging in specialised health care training for the first time, 141 are accreditations or modifications of the teaching capacity of existing teaching units, four of which correspond to new Multiprofessional Teaching Units (Unidades Docentes Multiprofesionales - UDM) in mental health, in which nurses specialised in mental health, clinical psychologists and psychiatrists will receive training. Four others are UDM in occupational health, where doctors and nurses specialised in occupational health will be trained. The Multiprofessional Teaching Units were created as provided in Art. 7 of Royal Decree 183/2008,[5] of 8 February 2008, which establishes and classifies the Health Science specialties and regulates certain aspects of specialised health care training. Finally, 195 accreditations were for new associated teaching units or facilities belonging to accredited teaching units, such as health centres or collaborating bodies.

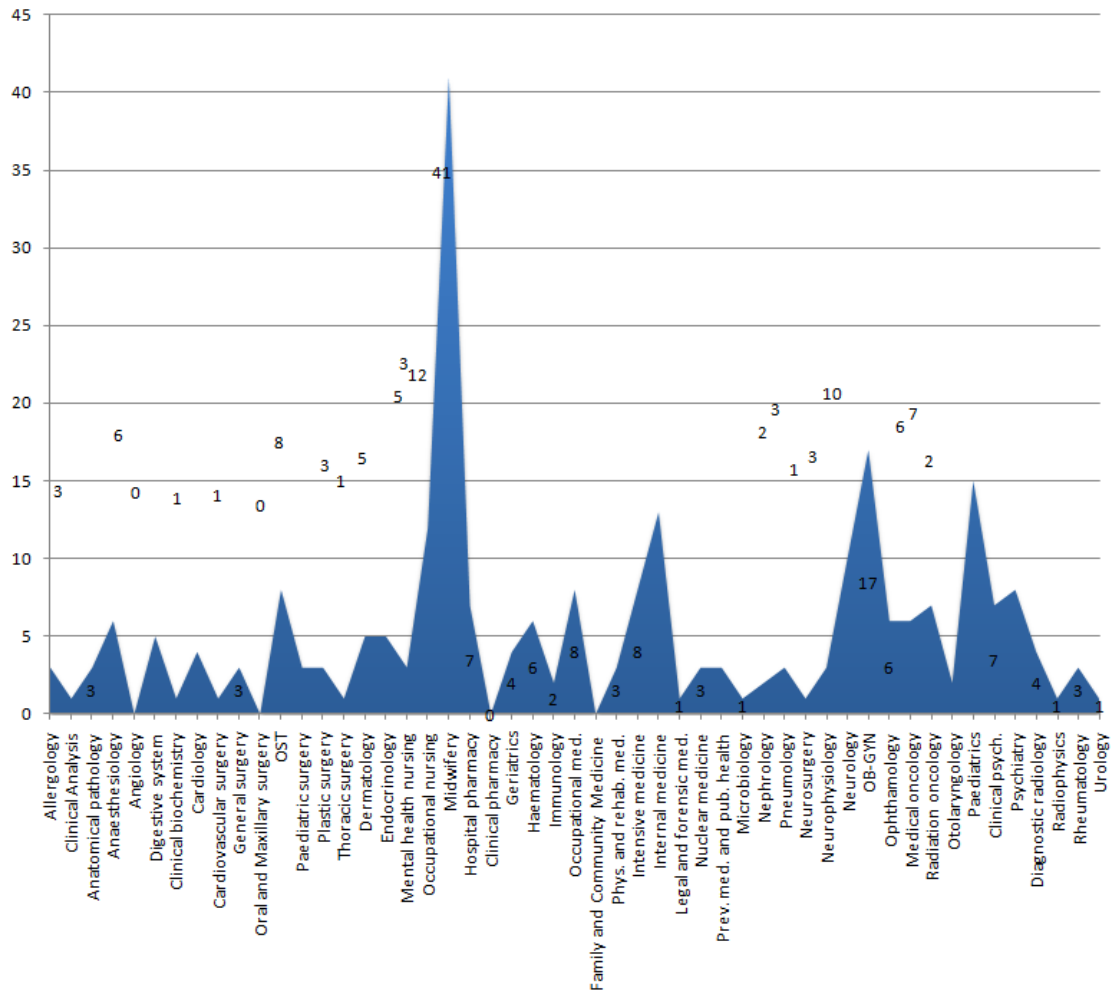
The number of accredited places in training programmes increased by 263. Of them, 148 correspond to expansions in the teaching capacity of teaching units that are already

[4] Accreditation of teaching centres and units for specialised health care training. [http://www.msc.es/profesionales/formacion/AcreDocCntUniForSanEsp.htm]

[5] Specialised Health Training System. Royal Decree 183/2008. [http://www.msc.es/profesionales/formacion/docs/realDecreto183_2008.pdf]

accredited and 115 correspond to places in programmes to be offered in newly-accredited units. By specialty, Figure 9.1 shows that the greatest increment in accredited teaching capacity is found in the specialty of obstetrical-gynaecological nursing (midwifery) with 41 new places becoming available, followed by obstetrics-gynaecology with 17 new places, paediatrics and its specific areas 15, internal medicine 13, occupational health nursing 12, and neurology 10.

Figure 9.1 **Expansion of specialised health training. New places accredited in 2009**



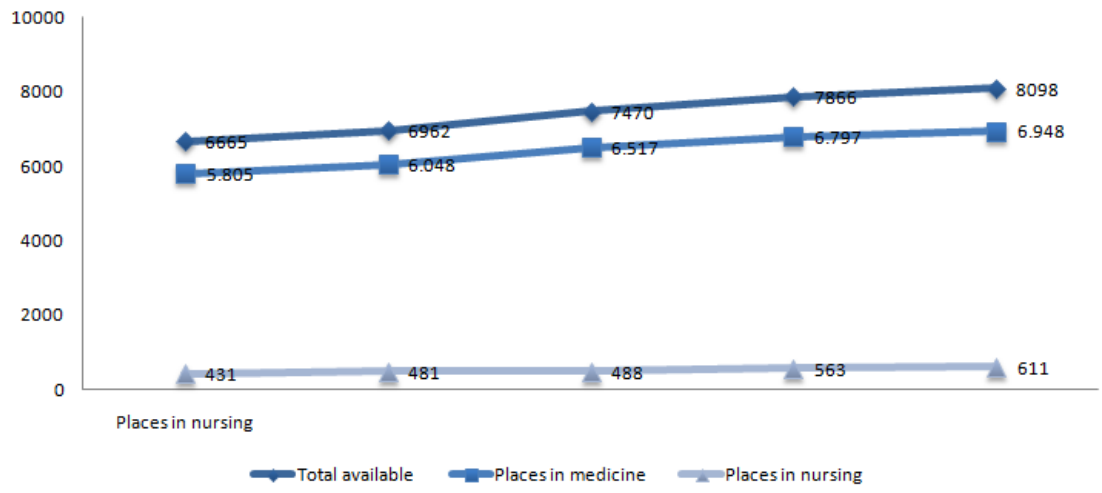
Source MSPSI.

Places available in specialised health training 2009-2010

In recent years, the number of places offered in specialised training programmes has increased progressively, in response to the SNS' expanding specialist needs (Figure 9.2). In the period 2005-2009, the percentage of increase was 21.5% overall. This increase affects all specialties, except clinical biochemistry, which experienced a 17.6% drop in the number of places offered. The specialties with the greatest growth in the number of places offered in the period 2005-2009 were: occupational medicine (71.8%),

radiopharmacy (50%), mental health nursing (48.6%), radiation oncology (47.4%) and medical oncology (47.2%).

Figure 9.2 **Evolution in specialised health training places offered, 2005-2009.**



Source MSPSI.

The call for applications to gain access to specialised training programmes in 2009-2010 was made public by a Ministerial Order published in the Official State Bulletin on 22 September 2009:

— Orden SAS/2510/2009,[6] of 14 September 2009, which calls for selective exams to be held in 2009 for access in 2010 to training programmes in the specialties of medicine, pharmacy, chemistry, biology, biochemistry, psychology and medical radiophysics.
— Orden SAS/2511/2009,[7] of 14 September 2009, which calls for selective exams to be held in 2009 for access in 2010 to training programmes in the specialties obstetrical-gynaecological nursing (midwifery), mental health nursing and occupational health nursing.

The number of places available for the year 2009-2010 was 8098, which is 3% more than the preceding year. This includes 7487 places for the specialties of medicine, pharmacy, chemistry, biology, biochemistry, psychology and radiophysics (7294 based on a residency programme and 193 based on class attendance). The number of places in programmes for training in medical specialties was 6948. The specialty with the highest number of places is family and community medicine, with 1904 places (27.4% of the total). Other specialties with high numbers of places are: paediatrics 413, anaesthesiology and recovery 342, internal medicine 342, obstetrics and gynaecology 275, psychiatry 248, diagnostic radiology 229 and orthopaedic surgery and trauma 224. All the medical specialties in which high numbers of places are offered (excepting internal medicine) are

[6] Orden SAS/2510/2009, de 14 de septiembre. [http://www.boe.es/boe/dias/2009/06/22/pdfs/BOE-A-2009-14989.pdf]
[7] Orden SAS/2511/2009, de 14 de septiembre. [http://www.boe.es/boe/dias/2009/06/22/pdfs/BOE-A-2009-14990.pdf]

specialties with shortages, according to the study "*Medical Specialist Supply and Needs in Spain (2008-2025)*" mentioned above. For nursing specialties, a total of 611 places were offered, which represents an increase of 8.5% over the preceding year. They are distributed as follows: mental health nursing 165, occupational health nursing 12 and obstetrical-gynaecological nursing (midwifery) 445. The students assigned the 12 places for training in occupational health nursing, which is offered for the first time, will receive their training in three accredited Multiprofessional Teaching Units (8 places in Andalucía, 1 in Castilla y León and 3 in Murcia).

Access to specialised health care training

Although in the preceding section the data mentioned refers to the call for applications for specialised training in 2009-2010, in this and the following section the data used is that of the call for applications for the academic year 2008-2009,[8] [9] since both the access exams and the adjudication of places took place over the course of 2009.

The selective exams held in 2008, for access to specialised health training programmes in 2009, were announced in Order SCO/2642/2008, of 15 September 2008, for the specialties of medicine, pharmacy, chemistry, biology, biochemistry, psychology and medical radiophysics and in Order SCO/2643/2008, of 15 September 2008, for the nursing specialties (both published in the Official State Bulletin on 19 September 2008).

All together, 22,562 of the candidates who applied were judged to fulfil the requirements and were thus allowed to register for the exams held on 24 January 2009. This figure represents 9.3% more than the preceding year and 20% more than in 2004. Compared to the preceding call for applications, the greatest percentage of increase in the number of candidates registered, 17.3%, was in nursing (Table 9.1,Table 9.2, Table 9.3).

When the adjudication of places took place in April, 91 of the places offered in the medical specialties remained vacant: 51 in family and community medicine, 4 places in authorised private centres (1 in anaesthesiology and recovery, 1 in clinical pharmacology, 1 in immunology and 1 in radiation oncology) and 36 places in physical education and sports medicine, a specialty whose training is based on class-attendance, not residency. The quota of places that could be adjudicated to medical professionals from non-EU countries and without legal residence in Spain (657) was reached: the last place adjudicated went to candidate number 8548 on the list of potential adjudicatees.

[8] Orden SCO/2642/2008, de 15 de septiembre, para las especialidades de Medicina, Farmacia, Química, Biología, Bioquímica, Psicología y Radiofísica Hospitalaria. [http://www.boe.es/boe/dias/2008/09/19/pdfs/A38245-38255.pdf]

[9] Orden SCO/2643/2008, de 15 de septiembre para las especialidades de Enfermería. [http://www.boe.es/boe/dias/2008/09/19/pdfs/A38255-38263.pdf]

Table 9.1 **Number of applications for the exam to access specialised training, by specialty. 2004-2008.**

Applications	Medicine	Pharmacy	Chemistry	Biology	Psychology	Radio-physics	Nursing	TOTAL
2008	11,330	975	168	382	2,346	257	7,104	**22,562**
2007	10,793	987	181	364	1,974	283	6,054	**20,636**
2006	9,629	970	218	421	2,090	333	6271	**19,932**
2005	8,997	949	214	408	2,057	337	5,913	**18,825**
2004	8,634	919	280	458	2,116	420	5,969	**18,796**

Source Sub-Directorate General of Professional Regulation. MSPSI.

Table 9.2 **Summary of relevant data regarding selective exams 2008/2009.**

		Medicine		Pharmacy		Chemistry		Biology		Psychology		Radio-physics		Nursing		TOTAL	
ADMISSION PHASE																	
Applications		11,330		975		168		382		2,346		257		7,104		22,562	
Candidates registered	Women (No, / %)	6,848	61.13	761	78.62	118	71.52	109	29.22	1.948	84.22	108	42.02	6.419	91.19	16.311	73.09
	Men (No, / %)	4,354	38.87	207	21.38	47	28.48	264	70.78	365	15.78	149	57.98	620	8.81	6.006	26.91
	total	11,202		968		165		373		2.313		257		7.039		22.317	
Candidates who sat the exam		9,611		872		121		284		1,964		201		5,553		18,606	
% candidates who sat exam/total registered		85,80		90,08		73,33		76,14		84,91		78,21		78,89		83,37	
Ratio candidates sitting exam/place		1,41		3,10		5,04		6,76		15,59		6,09		9,86			
Candidates on list of potential adjudicatees		9,428		857		118		280		1,948		37		5,525			
Ratio candidates on list of potential adjudicatees/place		1,39		3,05		4,92		6,67		15,46		1,12		9,81			
ADJUDICATION PHASE																	
Places offered		6,797		281		24		42		126		33		563		7,866	
Places adjudicated		6,706		281		24		40		126		33		563		7,773	
Places not adjudicated		91						2									
Last number on list with place adjudic.		9,425		523		28		40		126		33		1,970			

Source Sub-Directorate General of Professional Regulation. MSPSI.

Table 9.3 Summary of data and distribution by sex. Call for applications 2008 / 2009.

		Women		Men		
		Number	% of total	Number	% of total	TOTAL
Medicine	Candidates who registered for the exam	6,848	61.13	4,354	38.87	11,202
	Candidates who sat the exam	5,942	61.82	3,669	38.18	9,611
	Places adjudicated	4,410	65.75	2,297	34.25	6,707
Pharmacy	Candidates who registered for the exam	761	78.62	207	21.38	968
	Candidates who sat the exam	688	78.90	184	21.10	872
	Places adjudicated	222	79.00	59	21.00	281
Chemistry	Candidates who registered for the exam	118	71.52	47	28.48	165
	Candidates who sat the exam	88	72.73	33	27.27	121
	Places adjudicated	18	75.00	6	25.00	24
Biology	Candidates who registered for the exam	264	70.78	109	29.22	373
	Candidates who sat the exam	196	69.01	88	30.99	284
	Places adjudicated	27	67.50	13	32.50	40
Psychology	Candidates who registered for the exam	1,948	84.22	365	15.78	2,313
	Candidates who sat the exam	1,650	84.01	314	15.99	1,964
	Places adjudicated	105	83.33	21	16.67	126
Radiophysics	Candidates who registered for the exam	108	42.02	149	57.98	257
	Candidates who sat the exam	86	42.79	115	57.21	201
	Places adjudicated	11	33.33	22	66.67	33
Nursing	Candidates who registered for the exam	6,419	91.19	620	8.81	7,039
	Candidates who sat the exam	5,088	91.63	465	8.37	5,553
	Places adjudicated	525	93.25	38	6.75	563

Source: Sub-Directorate General of Professional Regulation. MSPSI.

Residents in training

In the second half of 2009, the Spanish Health Science specialisation system had 25,414 specialists in training, 1651 more than the year before (Table 9.4, Table 9.5).

Table 9.4 Residents in specialised training, by specialty. December 2009.

Specialty	Number
Allergology	176
Clinical analysis	306
Anatomical pathology	264
Anaesthesiology and recovery	1,231
Angiology and vascular surgery	165
Digestive system	498
Clinical biochemistry	210
Cardiology	644
Cardiovascular surgery	114
General and digestive surgery	747
Oral and maxillofacial surgery	139
Orthopaedic surgery and trauma	941
Paediatric surgery	88
Plastic, cosmetic and reconstructive surgery	154
Thoracic surgery	106
Medical-surgical dermatology and venereology	265
Endocrinology and nutrition	232
Mental health nursing	151
Obstetrical-gynaecological nursing	774
Hospital pharmacy	533
Industrial and galenic pharmacy	123
Geriatrics	167
Clinical pharmacology	49
Haematology and haemotherapy	404
Medical hydrology	22
Immunology	86
Occupational medicine	262
Physical education medicine	259
Family and community medicine	5,519
Physical medicine and rehabilitation	324
Intensive medicine	635
Internal medicine	1,298
Forensic medicine	88
Nuclear medicine	128
Preventive medicine and public health	208
Microbiology and parasitology	232
Nephrology	334
Pneumology	369
Neurosurgery	191
Clinical neurophysiology	143
Neurology	417
Obstetrics and gynaecology	932
Ophthalmology	604
Medical oncology	357
Radiation oncology	161
Otolaryngology	297
Paediatrics and its specific areas	1,423
Clinical psychology	334
Psychiatry	830
Diagnostic radiology	828
Radiopharmacy	15
Medical radiophysics	89
Rheumatology	176
Urology	372
TOTAL	**25,414**

Source Sub-Directorate General of Professional Regulation. MSPSI.

Table 9.5 Residents in the various years of specialised training, by autonomous community. December 2009.

Specialty	R1	R2	R3	R4	R5	TOTAL
Andalucía	1,154	1,003	936	874	146	4,113
Aragón	239	199	179	188	34	839
Asturias	177	150	144	140	23	634
Baleares	130	107	84	79	11	411
Canarias	260	236	205	204	31	936
Cantabria	115	114	103	103	21	456
Castilla y León	400	304	307	310	56	1,377
Castilla-La Mancha	300	247	181	187	29	944
Cataluña	1,222	1,054	951	860	157	4,244
Comunidad Valenciana	654	555	534	501	82	2,326
Extremadura	139	130	107	97	16	489
Galicia	346	317	301	282	57	1,303
Madrid	1,366	1,221	1,008	946	183	4,724
Murcia	246	187	152	148	24	757
Navarra	152	135	118	118	20	543
País vasco	338	291	247	233	35	1,144
La Rioja	37	38	31	42	6	154
Ceuta	7	4	0	0	0	11
Melilla	5	4	0	0	0	9
TOTAL	**7,287**	**6,296**	**5,588**	**5,312**	**931**	**25,414**

Source Sub-Directorate General of Professional Regulation. MSPSI.

Figures on specialist training in Spain indicate that health professionals have a high degree of international mobility, especially in the medical specialties, as shown by the increase in non-Spanish specialists (from both EU and non-EU countries) who receive training in Spain. In the second half of 2009 (once the group that had taken the selective exam in January had started their training) of the 23,323 residents studying medical specialties 4283 were not of Spanish nationality. Of these only 659 were from other EU countries.

Considering all the specialties whose programmes are based on a residency, over the course of 2009, 5585 residents completed the training programme that entitles them to be awarded the official certificate of Health Science specialist. Worth highlighting are the 1400 new specialists in family and community medicine, 309 in paediatrics and its specific areas, 201 in gynaecology and obstetrics, 221 in internal medicine and 278 in anaesthesiology and recovery (Table 9.6).

Table 9.6 Residents who completed their training in 2009.

Specialty	Number
Allergology	37
Clinical analysis	69
Anatomical pathology	42
Anaesthesiology and recovery	278
Angiology and vascular surgery	29
Digestive system	108
Clinical biochemistry	58
Cardiology	111
Cardiovascular surgery	16
General and digestive surgery	87
Oral and maxillofacial surgery	25
Orthopaedic surgery and trauma	162
Paediatric surgery	12
Plastic, cosmetic and reconstructive surgery	28
Thoracic surgery	13

Medical-surgical dermatology and venereology	53
Endocrinology and nutrition	51
Mental health nursing	124
Obstetrical-gynaecological nursing	350
Hospital pharmacy	117
Clinical pharmacology	14
Geriatrics	36
Haematology and haemotherapy	64
Immunology	20
Occupational medicine	55
Family and community medicine	1,400
Physical medicine and rehabilitation	72
Intensive medicine	115
Internal medicine	221
Nuclear medicine	28
Preventive medicine and public health	49
Microbiology and parasitology	56
Nephrology	77
Pneumology	64
Neurosurgery	23
Clinical neurophysiology	30
Neurology	95
Obstetrics and gynaecology	201
Ophthalmology	141
Medical oncology	79
Radiation oncology	27
Otolaryngology	70
Paediatrics and its specific areas	309
Clinical psychology	88
Psychiatry	172
Diagnostic radiology	188
Radiopharmacy	6
Medical radiophysics	27
Rheumatology	36
Urology	52
TOTAL	**5,585**
Source	Sub-Directorate General of Professional Regulation. MSPSI.

9.3 Ongoing training

Main actions related to ongoing training and the accreditation system

In 2009, the Plenum of the Commission on Ongoing Training in the Health Professions, constituted as provided in Royal Decree 1142/2007,[10] of 31 August 2007, drew up a "*Manual on the processes of the Commission on Ongoing Training in the Health Professions*" which specifies the foundations for normalising the entire process, identifying strategic, support and key processes.

The Commission also created the "*Accreditation information system*" which includes pertinent and significant data related to the accreditation of ongoing training activities. The system describes the set of accredited activities, thus providing a detailed source of information for professionals, institutions, corporations and authorities interested in the

[10] Royal Decree 1142/2007, on the composition and functions of the Commission on Ongoing Training in the Health Professions and on the system used to accredit ongoing training activities. [http://www.boe.es/boe/dias/2007/09/14/pdfs/A37544-37546.pdf]

accreditation system. Competent authorities from other EU member states can also access the information contained therein.

Similarly, the Commission adopted a merit scale model designed to reinforce the value of ongoing training and to define common criteria regarding the weight that training should have in the various selective processes. It introduces two new concepts; the expiration of training and pertinence of the training to the position held. As regards expiration, the model proposes that greater weight be assigned to the most recent training activities. As for the concept of pertinence, training activities more closely related to the area in which the professional works are assigned greater weight.

The Ongoing Training Commission also has a *"Plan for the auditing of accredited ongoing training activities."* The idea is to verify, using a systematic, independent and documented procedure, the training activity's degree of quality, understanding "quality" as its degree of suitability to the execution of the relevant activity and the verification of compliance, by the promoter/organiser, of the rules set forth in the accreditation procedure. The plan establishes two types of audit: the documentary audit and the on site audit. The first, which is performed after the training activity has concluded, is based exclusively on the documentation provided. The second, which requires that auditors be present at the activity itself, is based on verification while it is underway.

Work also went into the definition and design of the diplomas that certify accreditation and advanced accreditation.

Since the accreditation system as a whole is comprised, as provided in Royal Decree 1142/2007, of the Commission on Ongoing Training in the Health Professions and of the specific accreditation bodies created by the Ministry and the autonomous communities, in 2009 continued effort was devoted to implementation of the system at the regional level. To this end, regional commissions on ongoing training have been created and the accreditation system is operative through the administrative bodies of its Regional Ministries of Health. This territorial decentralisation is not complete; the situation in 2009 was as follows:

- Andalucía, Aragón, Baleares, Cantabria, Castilla-La Mancha, Galicia, Navarra, País Vasco and Valencia had an operative accreditation system covering all health professions, both those requiring degrees and those requiring vocational training, and all formats of training activities (regular and distance learning).
- Castilla y León, Catalonia, Extremadura, La Rioja, Madrid and Murcia had operative accreditation systems but they were limited to certain health professions and/or certain activity formats.
- In Asturias and Canarias the accreditation system was not operative.

Table 9.7 presents a summary of the actions performed by the accreditation system as a whole, including the number of activities accredited and their distribution in terms of the health professional targeted by the activities. All together 36,520 applications were received, with 86.6% of them receiving accreditation.

Table 9.7 Percentage of accredited activities by type of professional, 2009.

Type of professional	%
Professionals with degrees from University programmes lasting 3-6 years (1)	69.56
Technicians with higher level vocational training (2)	2.13
Technicians with intermediate level vocational training (3)	2.15
Multidisciplinary professionals (4)	25.15
Others	0.72
Notes	**1.** Doctors; pharmacists; orthodontists; veterinarians; physical therapists; nurses; occupational therapists; podiatrists; optometrists; speech therapists; nutritionists/dieticians. **2.** Technicians trained in anatomical pathology and cytology; dietetics; health documentation; dental hygiene; diagnostic imaging; prosthetics; dental prosthetics: radiotherapy; environmental health; hearing prosthetics. **3.** Second-level technicians trained in auxiliary nursing, auxiliary pharmacy, auxiliary health emergency specialist. **4.** Biologists, chemists, biochemists, physicists and psychologists who have specialised training in Health Sciences.
Source	Sub-Directorate General of Professional Regulation. MSPSI.

Certification of the course on radiological protection for professionals who perform interventional radiology procedures

In fulfilment of the resolution adopted by the Human Resources Commission of the SNS, published in Orden SCO/3276/2007,[11] the second level of training in radiological protection for professionals who perform interventional radiology procedures was established. This agreement, which complies with the provisions of Council Directive 97/43/EURATOM, states that specialists in diagnostic radiology, cardiology and other areas of specialisation that perform interventional radiology procedures in public or private health care institutions must have acquired, before they perform such procedures, a second level of training in radiological protection focusing specifically on interventional practices. This second level of training can be obtained in any of the following ways:

- Completing a course that meets the conditions established for this purpose in the document "Radiation Protection 116," the EU guidelines on education and training in radiation protection.
- Having completed, prior to the resolution, a course certified by the Directorate General of Public Health of the then Ministry of Health and Social Policy.
- Recognition of training received in other EU countries.

In 2009, the number of courses that requested accreditation was 28 and the number of medical professionals who successfully completed the courses was 469. The medical specialties of the professionals that completed the second level course are specified in Table 9.8.

[11] Orden SCO/3276/2007, de 23 de octubre, sobre el segundo nivel de formación en protección radiológica de los profesionales que llevan a cabo procedimientos de radiología intervencionista. [http://www.msc.es/profesionales/formacion/formacionContinuada/docs/OrdenSCO32762007SegundoNivelPR.pdf]

Table 9.8 Participants who successfully completed second-level training in radiological protection, by medical specialty. 2009.

Anaesthesiology and recovery	2
Angiology and vascular surgery	61
Cardiology	170
General and digestive surgery	3
Cardiovascular surgery	4
Orthopaedic surgery and trauma	5
Thoracic surgery	4
Digestive system	30
Physical education and sports medicine	1
Intensive medicine	12
Nuclear medicine	1
Pneumology	1
Neurosurgery	5
Clinical neurophysiology	1
Neurology	13
Odontology	1
Diagnostic radiology	129
Urology	26
TOTAL	**469**

Source Sub-Directorate General of Professional Regulation. MSPSI.

10 Research in the SNS

10.1 VI National Plan for Scientific RD&I (2008-2011). Strategic Action in Health

The Strategic Action in Health, a broad and comprehensive set of actions within the VI National Plan and the Annual Work Programme, calls for putting all necessary tools to work in pursuit of the general objective: *to generate knowledge with which to protect the health and well-being of citizens, and to further develop the preventive, diagnostic, curative, rehabilitative and palliative aspects of ill health, while at the same time strengthening the competitiveness and capabilities in RD&I of the SNS and the companies related to the sector*.

The Strategic Action in Health (hereinafter AES) is divided into five main areas of work and its specific objectives are as follows:

1. To increase public and private investment in health RD&I.
2. To increase the number and quality of the Human Resources in health RD&I.
3. To increase the scientific production and international dimension of health RD&I.
4. To increase the transfer of health knowledge and technology.

Conceptually, the AES receives, unifies, broadens and implements the actions laid down in the national programmes linked to the Life Sciences Area of the V National Plan for RD&I (2004-2007), which included the Sectorial Initiative for Health Research. To reach its objectives, the AES proposes the following lines of action: human resources, research projects, institutional consolidation, infrastructure, knowledge use, system articulation and internationalisation, complementary reinforcement actions. These lines of action take the form of various subprogrammes.

10.2 The role of Carlos III Health Institute in the AES

The Carlos III Health Institute (ISCIII) is a national, publicly-owned body devoted to scientific research and support. It was created by virtue of the General Health Care Act of 1986,[1] with further provisions being laid down in the Law on Cohesion and Quality in the SNS of 2003,[2] which is implemented in co-ordination with the CISNS and other government administrations, through the National Plan for RD&I and through the framework programmes of the European Union.[3] Its powers are laid down in the Law on

[1] Ley 14/1986 General de Sanidad. [http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-1986-10499]

[2] Ley 16/2003 de cohesión y calidad del SNS. [http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-2003-10715]

[3] Web CORDIS. The Gateway to European research and development. [http://cordis.europa.eu/home_es.html]

Biomedical Research of 2007.[4] Article 3 of Royal Decree 375 of 2001,[5] by which the Statute of the Carlos III Health Institute is approved, states that this body assumes responsibility for the planning, promotion and co-ordination of biomedical research and innovation, in accordance with the guidelines and objectives proposed by the government in its policy in the area of science, especially in the National Plan for RD&I, with functions such as the planning and management of the biomedical and health sciences research programmes included in the AES of the aforementioned National Plan. Powers in the area of biomedical and health research are held by the Ministry of Science and Innovation and the managing body of this area is the Carlos III Health Institute.

The instrumental lines of action handled by the Carlos III Health Institute in 2009 were:

- Human resources
- Projects
- Scientific-technological infrastructure

Human resources

Training and mobility subprogramme

— Predoctoral grants for training in health research (PFIS).
— Predoctoral grants for training in health research management (FGIN).
— "Río Hortega" grants for contracts involving research training for health professionals who have completed specialised health training.
— Grants for professionals wishing to receive further training through study visits (BAE).

Predoctoral grants for training in health research (PFIS)

The main purpose of these grants is to facilitate the training of researchers in biomedicine and health sciences, through the completion of a doctoral thesis in the area of focused basic biomedical research, clinical research or public health/health services research, to take place in research centres, under the guidance of consolidated or ascending research groups.

The grants last 48 months and are divided into two 24-month periods. The first period is a grant for studying and during it the recipient must show his/her sufficiency in research by obtaining an advanced studies diploma (*Diploma de Estudios Avanzados, or D.E.A.*). The second period is a work-experience contract that culminates in the reading of the doctoral thesis.

A total of 552 applications were submitted, with 62 of them receiving funding for a total of 967,200 Euros.

The autonomous communities that submitted the most applications were Madrid and Cataluña, each with 26% of submissions, followed by Andalucía (13.04%) and Comunidad Valenciana (10.69%). The distribution of funding in percentages was as follows: 48.39% went to Cataluña, 25.81% went to Madrid and 6.45% to Andalucía.

[4] Ley 14/2007, de 3 de julio, de Investigación biomédica.
[http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-2007-12945]

[5] RD 375/2001, de 6 de abril, por el que se aprueba el Estatuto del Instituto de Salud "Carlos III".
[http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-2001-8157]

Predoctoral grants for training in health research management (FGIN)

These grants seek to facilitate the training of predoctoral graduate students in the management of biomedical and health science research, including aspects related to co-ordination, follow-up and ex-ante and ex-post evaluation of the AES subprogrammes, by carrying out a series of activities, most of which take place at the Subdirectorate General for the Evaluation and Promotion of Research.

The programme is structured into two periods: the first period lasts 24 months, during which the selected candidates work as interns at the Subdirectorate General for the Evaluation and Promotion of Research. The second period is a two-year employment contract.

In 2009 there were 23 applications, 10 of which were selected and awarded a total of 156,000 Euros. It is interesting to note that 78.30% of the selected applicants were women. The participants hold degrees in Library and Information Science, Pharmacy, Law and Psychology, among others.

Río Hortega grants for contracts involving research training for health professionals who have completed specialised health care training.

The purpose of these grants is to promote research training for health professionals who have completed the official specialised training (FSE) programme for doctors, pharmacists, chemists, biologists, clinical psychologists and medical radiophysicists. Successful candidates are hired and carry out a research training programme in basic biomedical research, clinical research or public health/health services research, to be carried out at health centres with accredited research capacity, under the guidance of a research group.

The intention is to overcome the clear separation that exists between biomedical research and clinical practice, increasing the critical mass of specialists who are also researchers. These specialists-researchers are a key element in translational research, both in terms of transferring knowledge to patients and of generating research hypotheses derived from care activity.

These grants last a minimum of two years and a maximum of three years. The Carlos III Health Institute (ISCIII) pays 60% of the expenses, while the beneficiary institute (the institute that applies and where the research is to take place) pays the remaining 40%.

A total of 50 grants were awarded, of the 204 applications, for a total of 1,108,800 Euros.

Grants for professionals wishing to receive further training through study visits (BAE)

These grants promote mobility among SNS professionals, so as to enable them to learn or perfect techniques, technologies or procedures in research, development or technological innovation in the field of biomedicine, in areas of interest to the SNS, through study visits at prestigious institutions, in Spain or abroad.

The grants are also intended to strengthen collaborative relationships with other well-respected centres, which not only enhances the professional's skills but also brings benefits to the system as a whole.

The minimum stay is two months, while the maximum is 24 months. The grant is compatible with the individual's regular salary at his/her usual place of employment.

The number of applications in 2009 was 48. Of them 37 applications were selected and received funded for an amount totalling 389,300 Euros.

The destinations of the 37 individuals receiving such grants were North America (51.35%) and European countries (43.24%).

The autonomous communities with the highest number of applications were Madrid (33.33%) and Cataluña (22.92%).

Hiring and incorporation subprogramme

- "Sara Borrell" postdoctoral contracts for advanced training in health research
- "Miguel Servet" research contracts in the SNS
- Contracts for research support technicians in the SNS

"Sara Borrell" postdoctoral contracts for advanced training in health research

These contracts were established to allow young doctors to perfect their training for research in the area of biomedicine. The programme allows for part of the funded activity to take place in centres other than the beneficiary centre. The other centres can be in Spain or abroad but must be of international prestige.

They are also intended to encourage the participation of research personnel who perform care activities within the SNS and to promote the incorporation of young researchers to the Spanish System of Science and Technology (SECYT).

The contracts last four years. Starting preferably in the second year of the programme, part of the training must take place in an internationally recognised centre, in Spain or abroad, other than the beneficiary centre. The study visit must last between 12 and 24 months.

There were a total of 274 applications received in the 2009 call for applications. Of them 51 received funding, in the amount of 1,836,000 Euros. Their territorial distribution can be seen in Table 10.1.

"Miguel Servet" research contracts in the SNS

The main purpose of these contracts is to increase the number of researchers in the SNS institutions, to enhance the knowledge potential that can be transferred to clinical practice, by hiring doctors or other professionals with a demonstrated research background in biomedicine and health sciences, acquired at other Spanish or foreign institutions.

The incorporation of these professionals can be focused on the creation of new lines of research or on the consolidation of ones already existing at the centres they join. The contracts also seek to enhance the multidisciplinary nature of research activity in biomedicine and health sciences, and the interaction among the different approaches to this field within the SNS.

The subsidy lasts 3 years, with the ISCIII paying 75% and the hiring centre paying the remaining 25%. Once the three years of the contract have expired, the beneficiary centre can apply for a new subsidy from the ISCIII for a period no longer than three years. During this period the ISCIII will assume 50% of expenses.

These contracts entail a three-year project that is renewable on a yearly basis. The project's topic must be within the lines of the AES and its total cost must be no greater than 45,000 Euros.

The number of applications in 2009 was 224, with 34 of them being selected to receive funding for a total of 2,524,770 Euros. This figure includes the part that the Carlos III Health Institute pays of the annual contract expenses for the three years of the research project.

Table 10.1 "Sara Borrell" post-doctoral contracts (distribution by autonomous community).

	Call for applications 2009				
	Num. of applicants		Num. of applicants selected		Funding approved (thousands of Euros)
	female	male	female	male	
Andalucía	20	3	5	0	180
Aragón	5	2	1	0	36
Asturias	1	0	0	0	0
Baleares	1	0	0	0	0
Canarias	2	4	0	0	0
Cantabria	1	1	0	0	0
Castilla y León	5	4	0	1	36
Castilla-La Mancha	4	2	0	0	0
Cataluña	50	19	12	5	612
Comunidad Valenciana	14	9	2	2	144
Extremadura	0	0	0	0	0
Galicia	8	7	1	3	144
Madrid	71	21	13	4	612
Murcia	7	1	1	0	36
Navarra	1	4	1	0	36
País Vasco	5	2	0	0	0
La Rioja	0	0	0	0	0
TOTAL	195	79	36	15	1,836

Source: Annual Report of the Health Research Fund 2009

The success rate of the various autonomous communities in terms of applications submitted and funding obtained is as follows: Cataluña represents 33.93% of the total number of applications and 41.18% of the applications awarded funding, followed by Madrid with 25.45% and 17.65% respectively and Andalucía with 13.84% and 11.76% (Table 10.2).

Contracts for research support experts in the SNS.

The purpose of this type of subsidy is to optimise the technological resources shared by the research groups, such as epidemiological or biostatistical units, animal facilities, units for genomic or proteomic studies, units for growing cultures, microscopy, stage 1-2 clinical trials, etc. The professionals involved have the distinguishing trait of having to serve a number of research groups through the units that support research, research institutes or similar structures.

The contracts can be for professionals who have completed 5-year degree programmes, 3-year degree programmes or vocational training. ISCIII pays 50% of expenses and the applying institution the remaining 50%.

In 2009 the number of applications was 367, of which 65 were awarded funding for a total of 963,500 Euros.

There are two other mechanisms, involving agreements with the autonomous communities, that aim **to support the policy of stable hiring of SNS researchers** that were hired initially through the human resources programme of the Carlos III Health Institute and **to intensify the research activity of these institutions**, so as to maximise the capacity and productivity of professionals who combine research with care activity in the SNS. All of these forms of assistance strengthen research trajectories in Spain (Figure 10.1).

Table 10.2 "Miguel Servet" research contracts in the SNS (distribution by autonomous

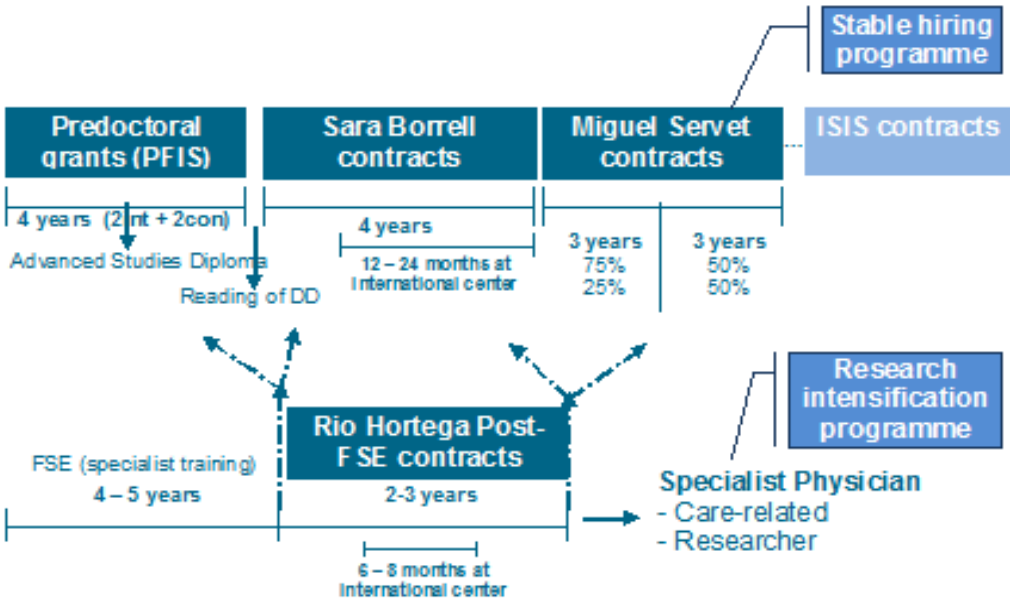
communities).

	Call for applications 2009				
	Num. of applicants		Num. of applicants selected		Funding approved (thousands of Euros)
	female	male	female	male	
Andalucía	20	11	1	3	301.50
Aragón	2	2	1	1	150.75
Asturias	1	1	0	0	0
Baleares	1	0	0	0	0
Canarias	1	0	0	0	0
Cantabria	0	1	0	0	0
Castilla y León	6	4	0	0	0
Castilla-La Mancha	3	1	0	0	0
Cataluña	49	27	9	5	1,015.15
Comunidad Valenciana	9	6	2	1	226.12
Extremadura	0	0	0	0	0
Galicia	8	2	2	1	225.12
Madrid	40	17	4	2	460.37
Murcia	2	0	0	0	0
Navarra	3	2	1	1	145.75
País Vasco	2	3	0	0	0
La Rioja	0	0	0	0	0
TOTAL	147	77	20	14	2,524.76

Notes: The total includes annual contract expenses and the three-year project.

Source: Annual Report of the Health Research Fund 2009

Figure 10.1 **Research trajectories in Spain.**



Source: Annual Report of the Health Research Fund 2009

Projects

— Health Research Projects subprogramme.
— Research Projects in Health Technology Assessment and Health Services subprogramme.

Health Research Projects

The main objectives of this subprogramme are to: fund stable, high-quality research; promote the funding of a researcher's first research project (10% of the projects); stimulate the presentation of co-ordinated projects; and encourage researchers who also perform care activities in the SNS to be the main researcher in projects (20% of the projects).

In the 2009 call for applications for grants from the Health Research Project subprogramme a total of 1773 applications were received, seeking 1,035,000 Euros.
Of them 656 projects were chosen to receive funding (70,491,000 Euros), with a territorial distribution similar to that of previous years, with predomination of Cataluña (31.40% of the total), Madrid (24.85%), Andalucía (10.21%) and Comunidad Valenciana (7.16%), in terms of both applications and funds received. (Table 10.3).

As for the gender of the main researcher in the project, in 38.11% of the cases it was a woman, while in 61.89% it was a man.

Regarding the objectives set in the call for applications, the percentages are as follows: emerging researchers represent 15.85% of the total; researchers also engaged in care activities are the main researchers in 47.10% of the projects funded and, as in previous years, in 80.18% of the projects funded the main researcher has exclusive dedication (he or she participates in only one research project of the National Plan for RD&I).

Table 10.3 R&D projects by autonomous community. Call for applications 2009.

	Applications submitted				Applications approved			
	Num. of projects	Main researcher		Subsidy (x 1000 €)	Num. of projects	Main researcher		Subsidy (x1000 €)
		female	male			female	male	
Andalucía	234	90	144	24,464	67	21	46	6,331
Aragón	40	18	22	3,999	20	12	8	1,537
Asturias	33	10	23	3,636	10	3	7	1,295
Baleares	35	18	17	3,320	10	6	4	1,098
Canarias	35	13	22	3,402	10	2	8	686
Cantabria	13	2	11	1,930	6		6	551
Castilla-La Mancha	24	7	17	2,498	10	2	8	827
Castilla y León	56	22	34	8,673	25	8	17	3,159
Cataluña	528	240	288	66,917	206	86	120	23,404
C, Valenciana	134	56	78	15,561	47	16	31	4,138
Extremadura	23	4	19	2,087	6	1	5	502
Galicia	78	25	53	9,709	23	9	14	2,629
Madrid	399	184	215	54,386	163	70	93	19,283
Murcia	27	4	23	3,039	7		7	500
Navarra	37	19	18	5,280	14	7	7	1,545
País Vasco	72	23	49	8,155	30	7	23	2,971
La Rioja	5	3	2	359	2		2	35
TOTAL	1,773	738	1,035	217,415	656	250	406	70,491
Notes	Amounts awarded including 21% in processing costs.							
Source	Annual Report of the Health Research Fund 2009							

Of all the projects funded, 76.22% will take place in SNS facilities, with the rest taking place in universities, public research institutions, etc.

For the second year in a row, in addition to the general option of Health Research Projects, it was possible to simultaneously submit the application as an INTRASALUD project.

The INTRASALUD projects are for consolidated groups engaged in translational health research. The duration of the projects in this category is four years and they are presented as individual projects. The main researcher of this type of project must have received continuous funding as such for the last nine years in three consecutive projects, each lasting over two years and receiving funding through public calls for submissions issued by the various agencies with responsibilities in the National Plan for RD&I. The researcher must also have steady scientific production over the last six years that is of considerable relevance in the area of research and he or she must have exclusive dedication to the project.

Of the 656 projects funded, 15 were INTRASALUD projects, granted for a period of four years, that also applied through the general call for submissions (granted for a period of three years). The characteristics of these projects are shown in (Table 10.4).

Of the 48 projects that applied through the INTRASALUD plan, with a funding request totalling 14,967,000 Euros, 15 were chosen for funding, in the amount of 6,772,000 Euros. Five of them did not obtain funding and the rest were awarded funding through the general category for projects lasting 3 years.

Table 10.4 R&D Projects (INTRASALUD) by autonomous community. Call for applications 2009.

	Applications submitted				Applications approved			
	Num. of projects	INTRASALUD		Subsidy (thousands of €)	Num. of projects	INTRASALUD		Subsidy (thousands of €)
		female	male			female	male	
Andalucía	6	2	4	1,38	0	0	0	0
Aragón	1	1	0	226	0	0	0	0
Asturias	2	0	2	650		0	0	0
Canarias	2	0	2	332	0	0	0	0
Castilla-La Mancha	2	1	1	498	1	0	1	183
Castilla y León	3	1	2	1,268	2	0	2	1,025
Cataluña	8	2	6	3,735	3	1	2	1,982
C. Valenciana	2	0	2	498	0	0	0	0
Galicia	2	1	1	612	1	0	1	463
Madrid	18	5	13	5,434	7	2	5	2,742
País Vasco	1	0	1	288	1	0	1	377
La Rioja	1	0	1	39	0	0	0	0
TOTAL	**48**	**13**	**35**	**14,967**	**15**	**3**	**12**	**6,772**
Notes	Amounts awarded including 21% in processing costs.							
Source	Annual Report of the Health Research Fund 2009							

Research Projects in Health Technology Assessment and Health Services

This subprogramme has two variations:

— To promote research that evaluates equity, efficacy, accessibility, quality and appropriate use of medical technologies considered to be of interest to the SNS (Variation A). Projects are presented individually, they last one to two years and the funding must not exceed 50,000 Euros per application.

— To promote public-private cooperation through partnership projects that focus on research in health technologies, telemedicine, e-health and information systems for the SNS (Variation B). Projects are presented as co-ordinated partnership projects and can last one, two or three years. In this case, the projects can be associated with companies or other public or private bodies, called EPO (*Entes Promotores Observadores*). The EPO can be Spanish or foreign companies or bodies that are interested in the research results, although they do not receive direct help because of their participation.

In 2009, applications seeking 39,798,000 Euros were submitted for the execution of 738 projects, of which 59 were Variation B. The funding granted, which was 6,967,000 Euros, was distributed in 144 projects, 36 of which were Variation B.
The autonomous communities that submitted the highest number of applications were Madrid (27.10%), Cataluña (24.93%) and Andalucía (14.36%). The autonomous community that received the most funding was Cataluña, with 30.56% (Table 10.5).

The funding went to SNS facilities in 81.94% of the cases, with the remaining 18.06% being divided between universities and public research bodies.

Table 10.5 **Research in health technology assessment and health services 2009.**

	Applications submitted				Applications approved			
	Num. of projects	Main researcher		Subsidy (thousands of €)	Num. of projects	Main researcher		Subsidy (thousands of €)
		female	male			female	male	
Andalucía	106	46	60	4,597	14	5	9	574
Aragón	14	5	9	1,438	4	1	3	270
Asturias	13	5	8	476	4	1	3	168
Baleares	11	5	6	433	3	2	1	67
Canarias	13	9	4	625	6	3	3	243
Cantabria	7	1	6	336	1	0	1	77
Castilla-La Mancha	14	3	11	1,571	5	1	4	310
Castilla y León	9	1	8	824	1	0	1	39
Cataluña	184	88	96	9,748	44	14	30	2,003
C. Valenciana	60	24	36	2,702	12	5	7	526
Extremadura	12	3	9	1,879	1	0	1	40
Galicia	29	10	19	1,435	4	0	4	160
Madrid	200	81	119	9,603	38	10	28	2,033
Murcia	11	3	8	345	0	0	0	0
Navarra	17	6	11	2,099	3	1	2	241
País Vasco	37	17	20	1,637	4	2	2	215
La Rioja	1	1	0	50	0	0	0	0
TOTAL	**738**	**308**	**430**	**39,798**	**144**	**45**	**99**	**6,967**
Notes	Amounts awarded with 21% in processing costs.							
Source	Annual Report of the Health Research Fund 2009							

Scientific-technological infrastructure

The purpose of this instrumental line is to acquire scientific infrastructure and equipment for facilities belonging to the SNS, to provide them with key installations and equipment for common use or for sharing by various research groups, particularly considering research support units, health research institutes or similar organisational structures. This line attempts to fill in technological voids in research and to avoid duplication.

Their price exceeds the limit usually established in the item reserved for inventoried material for research projects, which is considered 40,000 Euros. The funding granted by the ISCIII does not exceed 600,000 Euros per application and it covers 75% of the cost of the infrastructure. The beneficiary centre must pay 25% of the total cost.

In the 2009 call for applications, 156 applications seeking infrastructure subsidies were received, for a total of 33,683,000 Euros. Thirty-five applications were selected and a total of 8,480,000 Euros in funding was granted. The subsidies were distributed as shown in Table 10.6.

Table 10.6 Infrastructure subsidies. Call for applications 2009.

	Applications submitted		Applications approved	
	Num. of applications	Subsidy (thousands of €)	Num. of applications	Subsidy (thousands of €)
Andalucía	33	4,454	4	866
Aragón	3	852	1	194
Asturias	2	350	0	0
Baleares	10	695	0	0
Canarias	5	482	1	111
Cantabria	2	479	1	158
Castilla-La Mancha	9	1,300	2	404
Castilla y León	6	686	1	167
Cataluña	35	9,036	9	2,357
Comunidad Valenciana	11	3,392	3	752
Extremadura	3	806	0	0
Galicia	4	1,669	2	553
Madrid	27	5,510	8	2,088
Murcia	1	414	1	311
Navarra	4	2,265	0	0
País Vasco	4	1,293	2	519
La Rioja	0	0	0	0
TOTAL	159	33,683	35	8,480

Source: Annual Report of the Health Research Fund 2009

Abbreviations, acronyms and initials

A	
AAGR	Average Annual Growth Rate
ACG	Adjusted Clinical Groups
ADR	Adverse Drug Reaction
AEMPS	*Agencia Española de Medicamentos y Productos Sanitarios* (Spanish Agency of Medicines and Health Products)
AESAN	*Agencia Española de Seguridad Alimentaria y Nutrición* (Spanish Agency for Food Safety and Nutrition)
AESLEME	*Asociación para el Estudio de la Lesión Medular Espinal* (Association for the Study of Spinal Cord Injuries)
AIDS	Acquired Immunodeficiency Syndrome
ALCON	*Alertas y Control Oficial* (Information System for Alert Management and Official Controls)
ALDAGUA	*Sistema de Información Ejecutiva de Agua de Consumo* (Executive Drinking Water Information System)
ALS	Amyotrophic Lateral Sclerosis
AMAC	Assessing Migrants and Communities
APRAMP	*Asociación para la Prevención, Reinserción y Atención a la Mujer Prostituida* (Association for the Prevention, Reinsertion and Care of Prostitutes)
ASPAYM	*Asociación de Lesionados Medulares y Grandes Discapacitados Físicos* (Association of Persons with Spinal Cord Injuries and Major Physical Disabilities)
ATC	Anatomical, Therapeutic, Chemical Classification System
ATLANTIS	*Sistema de Información Geográfica de Calidad Sanitaria del Agua* (Geographical Information System on Water Quality)
AUnETS	*Plataforma de Agencias y Unidades de Evaluación de Tecnologías Sanitarias* (Platform of Health Technology Assessment Agencies and Units)
AUPEX	*Asociación de Universidades Populares de Extremadura* (Association of Popular Universities in Extremadura)
AUTOCONTROL	Association for Self-regulation in Advertising
B	
BIFAP	*Base de datos para la Investigación Farmacoepidemiológica en Atención Primaria* (Database for Pharmacoepidemiological Research in Primary Care)
BMI	Body Mass Index
BPM	Business Process Modeling
C	
CAEM	*Centro de Atención Especializada a Menores* (Centre for Specialised Care for Children)
CAEX	*Comité Ciudadano Antisida de la Comunidad Autónoma de Extremadura* (Citizen anti-AIDS Committee of Extremadura)
CASAP	*Castelldefels Agents de Salut* (Castelldefels Health Agency)
CAT	Computerized Axial Tomography
CC	Comorbidity and/or Complications
CCAES	*Centro de Coordinación de Alertas y Emergencias Sanitarias* (Co-ordinating Centre for Health Alerts and Emergencies)
CCOO	Union organisation *Comisiones Obreras*
CCST	*Comité Científico para la Seguridad Transfusional* (Scientific Committee for Transfusion Safety)
CCU	Critical Care Unit
CDA	Clinical Document Architecture

CDC	Center for Disease Control and Prevention
CE (declaration)	Declaration of European Conformity (Conformité Européenne)
CEDEX	*Centros de Drogodependencias de Extremadura* (Drug Treatment Centres of Extremadura)
CEPG	*Consejo Estatal del Pueblo Gitano* (State Council of the Roma Community)
CEVIHP	*Grupo Colaborativo Español de VIH Pediátrico* (Spanish Collaboration Group on Paediatric HIV)
CHF	Congestive Heart Failure
CIBER	*Centros de Investigación Biomédica en Red* (Networks of Biomedical Research Centres)
CIBERER	CIBER on rare diseases
CIMA	*Centro de Información online de Medicamentos* (On-line pharmaceutical information centre of the AEMPS)
CIS	*Centro de Investigaciones Sociológicas* (Sociological Research Centre)
CISNS	*Consejo Interterritorial del Sistema Nacional de Salud* (Interterritorial Council of the SNS)
CMMI	Capability Maturity Model Integration
CMU	Clinical Management Unit
COCEMFE	*Confederación Coordinadora Estatal de Minusválidos Físicos de España* (Spanish Co-ordinating Confederation of Persons with Physical Disabilities)
COMESEM	*Corona Metropolitana Sureste de Madrid* (Southeast area of metropolitan Madrid)
Contract MIGUEL SERVET	One variant of the research contracts of the SNS
Contract RIO HORTEGA	Grants for research training contacts for health professionals who have completed FSE.
Contract SARA BORRELL	Postdoctoral contracts for advanced training in health research
COPD	Chronic Obstructive Pulmonary Disease
CPU	Central Processing Unit
CSDH	Commission on Social Determinants in Health (WHO)
CSISP	*Centro Superior de Investigación en Salud Pública* (Public Health Research Centre)
CSUR	*Centros, Servicios y Unidades de Referencia* (Reference Centres, Services and Units)
CVD	Cardiovascular Disease
D	
DD	Doctoral Dissertation
DDD	Defined Daily Dose
DDI	Daily Dose per Inhabitant: DDD per 1000 inhabitants per day
DEA	*Diploma de Estudios Avanzados* (Advanced Studies Diploma)
DG-SANCO	Directorate General of Health and Consumer Affairs of the European Union
DGT	*Dirección General de Tráfico* (National Traffic Authority)
DM	Diabetes Mellitus
DRG	Diagnosis Related Groups
DTC	Daily Treatment Cost
DVD	Digital Versatil Disc
E	
EAI	Enterprise Application Integration
ECHA	European Chemicals Agency

EESCRI	*Estadística de Establecimientos Sanitarios con Régimen de Internado* (Statistical Study on Inpatient Medical Facilities).
EFG	*Equivalente Farmacéutico Genérico* (Generic Pharmaceutical Equivalent)
EFQM	European Foundation for Quality Management
EFSA	European Food Safety Authority
EHR	Electronic Health Record
EHR-SNS	Project on Electronic Health Records in the SNS
EMA	European Medicines Agency
EPSCO	Employment, Social Policy, Health and Consumer Affairs Council of the EU.
epSOS	European Patient – Smart Open Services. European project for the sharing of clinical information (electronic prescription and patient summaries) of patients receiving care in a country other than their place of residence.
ERC	European Resuscitation Council
ESB	Enterprise Service Bus
ESO	*Educación Secundaria Obligatoria* (Compulsory Secondary Education)
ETOP	Elective Termination of Pregnancy
EU	The European Union in its current form, with 27 member states
EU-12	The 12 states that joined the European Union after 2004.
EU-15	The 15 states belonging to the European Union since before 2004.
EURATOM	European Atomic Energy Community
EUROPLAN	European Project for Rare Diseases National Plans Development
Eurostat	Statistical Office of the European Communities
F	
FAO	Food and Agriculture Organisation of the United Nations
FEA	*Facultativo Especialista de Área* (Specialist Physician)
FEDRA	*Farmacovigilancia Española. Datos de Reacciones Adversas* (Spanish Pharmacovigilance System Database of Adverse Reactions)
FEMP	*Federación Española de Municipios y Provincias* (Spanish Federation of Municipalities and Provinces)
FIAB	Spanish Federation of Food and Beverage Industries
FIPSE	*Fundación para Investigación y la Prevención del VIH en España* (Foundation for AIDS Research and Prevention in Spain)
FISLEM	*Fundación para la Integración Sociolaboral del Enfermo Mental* (Foundation for the Social and Occupational Integration of the Mentally Ill)
FORTA	*Federación de Organismos de Radio y Televisión Autonómicos* (Federation of Regional Radio and Television Stations)
FSE	*Formación Sanitaria Especializada* (Specialised Health Care Training)
FSG	*Fundación Secretariado Gitano* (Roma Secretariat Foundation)
FUNDADEPS	*Fundación de Educación para la Salud* (Health Education Foundation)
G	
GAISHC	*Grupo Asesor de Interoperabilidad Semántica de la HCDSNS* (Advisory group on semantic interoperability in the EHR-SNS project)
GCP	Good Clinical Practice
GCPHC	Group of autonomous communities participating in EHR-SNS pilot testing
GDP	Gross Domestic Product
GERT	*Grupo de trabajo de Estándares y Requerimientos Técnicos* (Working group on standards and technical requirements)

GESIDA	*Grupo de Estudios del Síndrome de Inmunodeficiencia Adquirida* (AIDS Study Group)
GMP	Good Manufacturing Practices
GPvP	Good Pharmacovigilance Practice
H	
HCAI	Health Care Associated Infection
HCDSNS	*Historia Clínica Digital del Sistema Nacional de Salud* (Electronic Health Records in the SNS project)
HIPP	Health in Prison Project
HIV	Human Immunodeficiency Virus
HLE	Healthy Life Expectancy
HPV	Human Papiloma Virus
HSCT	Hematopoietic Stem Cell Transplantation
I	
IANUS	Electronic Health Record project of the Health Services of Galicia
ICD-9-CM	International Classification of Diseases, 9th Revision, Clinical Modification
ICT	Information and Communication Technologies
IDU	Intravenous Drug Users
IGAE	*Intervención General de la Administración del Estado* (General Comptroller of the State Administration)
IHR-2005	International Health Regulations-2005
IHTSDO	International Health Terminology Standards Development Organization
IMP	Investigational Medicinal Product
INE	*Instituto Nacional de Estadística* (National Statistics Institute)
INFOSAN	International Food Safety Authorities Network
INGESA	*Instituto Nacional de Gestión Sanitaria* (*National Institute of Health Management* - the body responsible for health care in Ceuta and Melilla)
INN	International Nonproprietary Names
INR	International Normalized Ratio
INSS	*Instituto Nacional de la Seguridad Social* (National Social Security Institute)
IOM	International Organisation for Migration
ISFAS	*Instituto Social de las Fuerzas Armadas* (Social Institute of the Armed Forces)
ISM	*Instituto Social de la Marina* (Social Institute of the Merchant Navy)
ISMS	Information Security Management System
ISO	International Organization for Standardization
ITES	*Intervención en Tabaquismo en Enseñanza Secundaria* (Smoking Prevention at Secondary Schools programme)
ITIL	Information Technology Infrastructure Library
L	
LE	Life Expectancy
M	
MAGERIT	*Metodología de Análisis y Gestión de Riesgos de los Sistemas de Información de las Administraciones Públicas* (Methodology for analysis and management of the risks associated with the Information Systems of the public administrations)

MBDS	Minimum Basic Data Set
MIR	*Médico Interno Residente* (post-graduate training system by which doctors become specialists)
MSM	Men who have unprotected Sex with Men.
MSPS	*Ministerio de Sanidad y Política Social* (Ministry of Health and Social Policy)
MSPSI	*Ministerio de Sanidad, Política Social e Igualdad* (Ministry of Health, Social Policy and Equality)
MUFACE	*Mutualidad General de Funcionarios Civiles del Estado* (Insurance mutual for government employees)
MUGEJU	*Mutualidad General Judicial* (Insurance mutual for judicial system employees)
N	
NAOS	*Nutrición, Actividad Física y Prevención de la Obesidad* (Strategy for Nutrition, Physical Activity and Obesity Prevention)
NÁYADE	*Sistema de Información Nacional de Agua de Baño* (National Information System on Water for Bathing)
O	
OBTEDIGA	*Objetivos Terapéuticos en Diabetes de Galicia* (Galicia's Regional Project on Therapeutic Objectives in Diabetes)
OECD	Organisation for Economic Cooperation and Development
OID	Object Identifier
ONT	*Organización Nacional de Trasplantes* (Spain's National Transplant Organisation).
OSM	*Observatorio de Salud de las Mujeres* (Women's Health Observatory)
P	
PAIEM	*Programa de Atención Integral a Enfermos Mentales* (Comprehensive care programme for the mentally ill)
PAOS	*Autorregulación de la Publicidad de Alimentos dirigida a menores, prevención de la Obesidad y la Salud* (Code for Self-regulation in Food Advertising aimed at Children)
PC	Primary Care
PCT	Primary Care Teams
PENIA	*Plan Estratégico Nacional de la Infancia y Adolescencia* (Strategic National Plan for Childhood and Adolescence)
PERSEO	*Programa Piloto Escolar de Referencia para la Salud y el ejercicio, contra la Obesidad* (School-based Pilot Programme for Health and Exercise and against Obesity)
PFIS	*Ayudas Predoctorales de Formación en Investigación en Salud* (Predoctoral Grants for Training in Health Research)
PHEII	Public Health Emergency of International Importance
PMP	Per Million Population
PRCS	*Plan de Reducción de Consumo de Sal* (Plan to reduce salt consumption)
PS	Patient safety
PSI	*Programa de Seguimiento Individualizado* (Individualised monitoring programme)
PVP	*Precio de Venta al Público* (Retail Price)
R	
RASFF	Rapid Alert System Food and Feed.
RCIDT	*Red/Consejo Iberoamericano de Donación y Trasplantes* (Latin American Network/Council on Donation and Transplants)
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
REACH-IT	Registration, Evaluation, Authorisation and Restriction of Chemicals-Information Tool
RECAP	Regional Registry of Psychiatric Cases of Canarias

RECS	*Red Española de Ciudades Saludables* (Spanish Network of Healthy Cities)
Red HsH	*Red de Hospitales sin Humo* (Network of smoke-free hospitals)
REDMO	*Registro de Donantes de Médula Ósea* (Register of Bone Marrow Donors)
REINA report	Annual indicator of the degree of ICT use in the public administration
REpIER	*Red Epidemiológica de Investigación en Enfermedades Raras* (Network of Epidemiological Research on Rare Diseases)
RETISALUD	*Programa de detección precoz y seguimiento de la Retinopatía Diabética* (Programme for the Early Detection and Monitoring of Diabetic Retinopathy)
REUS	*Red Española de Universidades Saludables* (Spanish Network of Healthy Universities)
RIPE	Reach Information Portal for Enforcement
	S
SaMAP project	*Mejora de la Calidad en la Atención a los Trastornos Mentales Comunes en Atención Primaria* (Project for Quality Improvements in the Care of Common Mental Illnesses in Primary Care)
SC	Specialised Care
SCIRI	*Sistema Coordinado de Intercambio Rápido de Información* (Co-ordinated System of Rapid Information Exchange)
SEFV-H	*Sistema Español de Farmacovigilancia Humana* (Spanish System of Human Pharmacovigilance)
SEGUIMED	Computer application that keeps track of transactions between labs, warehouses and dispensing pharmacies
SEIP	*Sociedad Española de Infectología Pediátrica* (Spanish Society of Paediatric Infectology)
SEMYCIUC	*Sociedad Española de Medicina Intensiva y Unidades Coronarias* (Spanish Society of Critical Care Medicine and Coronary Units)
SENECA	*Seguridad: Estudio Nacional de Estándares de Calidad* (Study on Care Quality Standards for Patient Safety in SNS Hospitals)
SIFCO	*Sistema de Información del Fondo de Cohesión* (Information System of the Health Cohesion Fund)
SILC	Statistic on Income and Living Conditions published by Eurostat
SINAC	*Sistema de Información Nacional de Agua de Consumo* (National Information System on Drinking Water)
SIRIPQ	System for the Rapid Exchange of Information about Chemical Products
SMI	Severe Mental Illness
Snomed CT	Systematized Nomenclature of Medicine-Clinical Terms
SNS	*Sistema Nacional de Salud* (National Health System of Spain)
SOA	*Service Oriented Architecture*
SOAP	Simple Object Access Protocol
SPNS	*Secretaría del Plan Nacional sobre el SIDA* (National AIDS Plan Secretariat)
STD	Sexually Transmitted Disease
STEMI	ST Elevation Myocardial Infarction
	T
TB	Tuberculosis
TTS	The Transplantation Society
	U
UCAI	*Unidad de día y Consulta de Atención Inmediata para crónicos* (Day Hospital Unit with Immediate Care for Chronic Patients)
UCB	Umbilical Cord Blood
UDM	*Unidad Docente Multiprofesional* (Multiprofessional Teaching Unit)

UGT	Union organisation *Unión General de Trabajadores*
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	*Asociación Gitana de Asturias* (Roma Association of Asturias)
UPNA	*Universidad Pública de Navarra* (Public University of Navarra)
UTECA	*Unión de Televisiones Comerciales Asociadas* (Union of Associated Commercial Television Networks)
	V
WHO	World Health Organisation
	X
XML	eXtensible Markup Language

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