Aspects related with the planning and development of human resources[76]

The suitable preparation of the human resources of the National Health System is a fundamental factor in ensuring quality health care. The report on the supply and demand of medical specialists in Spain (2006-2030) makes it clear that "…the demographic structure of the population in general, the demographic structure of the medical professions, the resources assigned to the sector, the epidemiological characteristics of the population etc., are all different inputs whose relative values will largely determine the success of planning" (Beatriz González and Patricia Barber, 2006)[77].

The legal status of those health workers who are employed in the regime of the statutes should be made clear. Constitution establishes that a distinction can only be drawn between persons working in the civil service and those working on an employment contract. The personnel employed under the statutes clearly belong to the civil service, despite their special conditions[78].

Moreover, although the majority of those employed in the civil service in Spain work under the statutory regime, it is not the only option that exists. In certain Autonomous Communities (Catalonia), workers employed under the statutory regime are outnumbered by workers employed under different conditions.

Global availability and specialization. The Organization of the Medical Professions Act, 44/2203 of the 22nd of November, includes as medical professions those in which the undergraduate or specialized training is specifically and fundamentally oriented towards endowing trainees with the knowledge, skills and attitudes required for providing health care and which

76 This text has been written on the basis of the responses available, which correspond to all the communities (including Ingesa), although the information provided by Cantabria did not include some of the entries. This can be corrected easily by adding the data in the appropriate fields, once it becomes available.

77 The entire document can be accessed at: www.msc.es/novedades/docs/necesidadesEspeciales06_30.pdf

78 The Act 55/2003, regulating the statutory framework of this personnel, states in its first article that: "This Act has as its object to establish the regulatory basis of the special civil service status applied to statutory personnel of the health services which form part of the National Health System, via the statutory framework of said personnel".

are organized in professional schools[79]. Health services obviously require a great many other skills which cannot be included within this definition in order to be able to function correctly. Table IX indicates the overall number

Table IX: Total number of health professionals (primary health care and specialists), paediatricians (primary care) and nursing (primary care and specialists), and rate per 1,000 inhabitants, 2006

Autonomous community	Population*	Medicine		Paediatrics		Nursing	
		Total	Rate	Total	Rate	Total	Rate
Andalusia	7,975,672	16,793	2.1	1,072	0.1	27,873	3.5
Aragon	1,277,471	2,905	2.3	141	0.1	4,358	3.4
Asturias	1,076,896	2,870	2.7	128	0.1	4,303	4.0
Balearic Islands	1,001,062	1,871	1.9	127	0.1	3,030	3.0
Canary Islands	1,995,833	1,041	0.5	95	0.0	3,794	1.9
Cantabria[82]	0	0	0.0	0	0.0	0	0.0
Castile and Leon	2,523,020	7,604	2.8	70	0.1	9,852	3.9
Castile-La Mancha	1,932,261	4,635	2.4	212	0.1	6,290	3.3
Catalonia**	7,134,697	32,745	4.6	664	0.1	39,736	5.6
Valencian Community	4,806,908	9,122	1.9	737	0.2	14,337	3.0
Extremadura	1,086,373	2,940	2.7	131	0.1	4,022	3.7
Galicia	2,767,524	7,351	2.7	339	0.1	10,284	3.7
Madrid	6,008,183	11,762	2.0	817	0.1	17,614	2.9
Murcia	1,370,306	3,050	2.2	187	0.1	4,327	3.2
Navarre	601,874	1,179	2.0	87	0.1	1,957	3.3
Basque Country	2,133,684	4,204	2.0	253	0.1	6,485	3.0
Rioja	306,377	345	1.1	29	0.1	951	3.1
Ingesa (Ceuta and Melilla)	142,732	246	1.7	23	0.2	474	3.3
Total* **	**44,140,873**	**110,663**	**2.5**	**5,112**	**0.1**	**159,565**	**3.6**

* National Statistics Institute, 2006.
** The results for Catalonia are based on a different methodology founded on a demographic survey.
*** Total of all the Autonomous Communities, except Cantabria (population: 568,091).

79 These professions are classified in three groups: graduates of medical school, pharmacists, orthopaedic surgeons, veterinary surgeons and specialists in the health sciences (chemists, physicists, psychologists, etc.); those with higher qualifications in nursing, chemistry, biology, biochemistry, physiotherapy, occupational therapy, chiropody, optometry, speech therapy and nutrition; and those with diplomas in the health sciences and others such as prosthetic technicians and dental hygienists.

of health professionals[80] who work in the health systems of the Autonomous Communities.

The case of Catalonia[81], which is based on its method of measurement of humans resources, cannot be compared with the other communities[82].

In general, the variations in the availability of professionals per number of inhabitants, which is far greater among the medical professions, can mean that the best endowed areas can triple the number of specialists availablecompared with the less privileged areas. Differences also exist in terms of nursing, but they never reach the point where they are doubled. Apart from the measuring bias that may exist, we should not be led into hurried conclusions without analysing the diversity of situations among health services, the speed and peculiarities of demographic change in each territory and their various epidemiological profiles.

These tasks, which should be carried out in order to improve our understanding the problems in the current distribution of human resources, is beyond the scope of this document.

As it is, figures 6 to 9 show us the age structure within the medical professions and nursing, and they hint at a progressive aging of the medical profession, in which the oldest members are increasing in number, while the younger members see their importance diluted. This question is vital in the current debate on forced retirement within the public sector.

Feminization. Figures 10-14 confirm the progressive and recognised feminization of the medical profession, and the maintenance of the existing profile in nursing. There are various opinions on the impact this will have on the transformation of their professional role[83]. Some hypotheses concerning

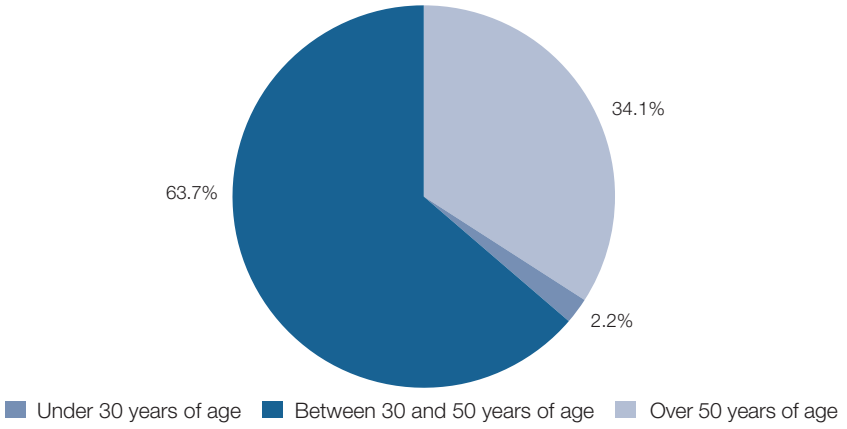
80 For lack of space, and because of the coherence of the data available, the report is limited to the medical professions and nursing. There are a number of other health professionals with key roles in the system, and they should be analysed in later studies. Some of them are primarily employed in the private sector (such as pharmacists), although they handle a significant part of the public budget.

81 The Catalan system maintains a stricter separation between the functions of finance and purchasing on one hand, which is controlled by CatSalut, the Catalan Health Service, and on the other with the provision and management of services, which is entrusted to private and public service providers. This calls for greater diversity among the companies providing services, and also therefore in the human resources data registers. For this reason, the calculation of the number of persons working in the public sector in the autonomous community must be made from sources and databases built with different criteria from that used for counting workers in the other communities, which makes it difficult to compare the data in the tables.

82 The field for Cantabria is at 0 because they have not sent any data.

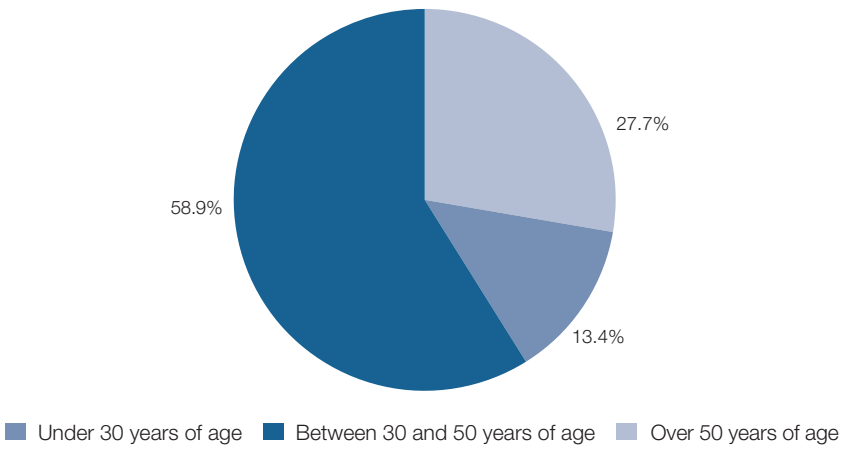
83 See, for example, the Centre for Demographic Studies. *Demography of the medical professions in Catalonia.* Accessed in August 2007 at: www.gencat.net/salut/ies/Du11/html/ca/dir1604/dn1604/estudi_demografic.pdf o Comissió d'Ordenació de la Professió Mèdica. The need for doctors in the Catalan Health System: causes and solutions at: www.metgesdecatalunya.net/informecpmcnecessitatmetges.pdf (Barcelona, 2007).

Figure 6: Medical Professionals and paediatricians in primary health care, by age, 2006



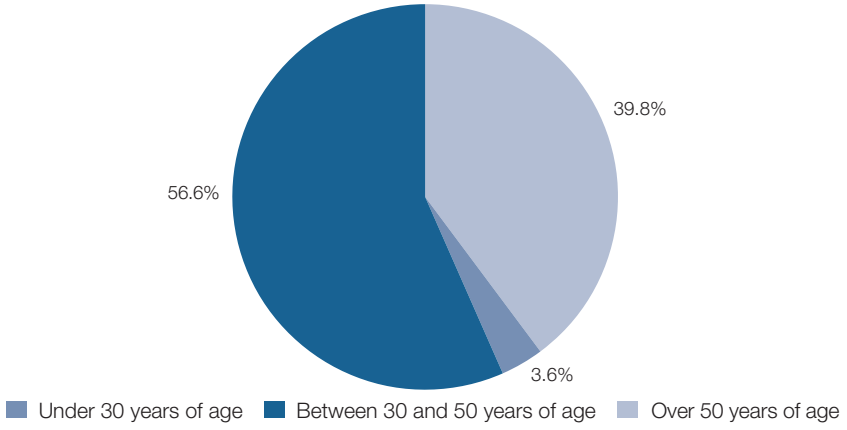
Created with data from Autonomous Communities, 2006.

Figure 7: Nursing Professionals in primary health care, by age, 2006



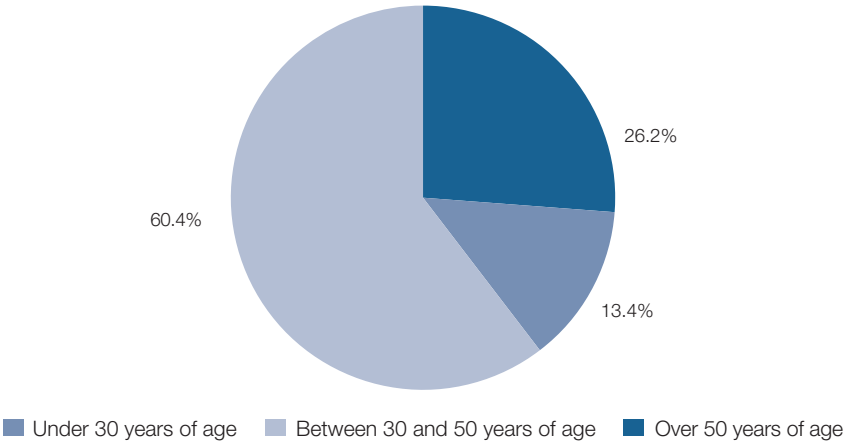
Created with data from Autonomous Communities, 2006.

Figure 8: Medical Professionals in specialised health care, by age, 2006



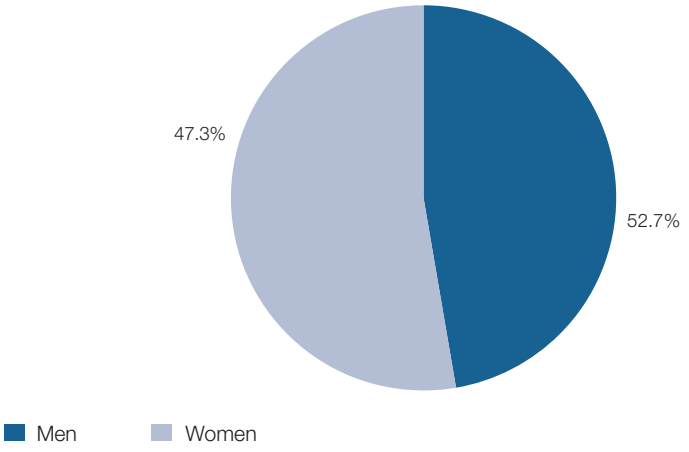
Created with data from Autonomous Communities, 2006.

Figure 9: Nursing Professionals in specialised health care, by age, 2006



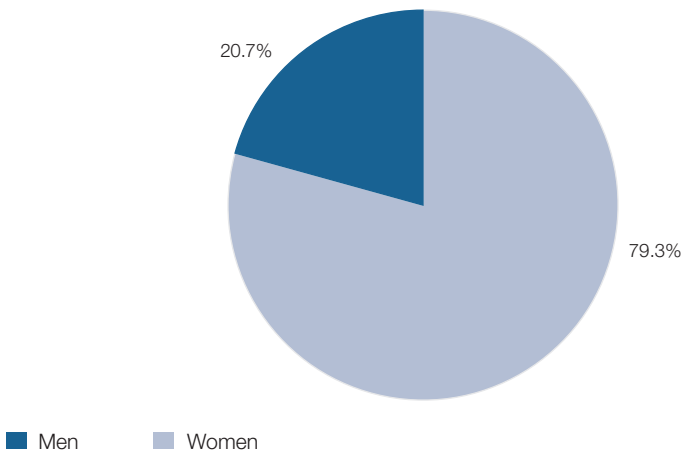
Created with data from Autonomous Communities, 2006.

Figure 10: Medical Professionals in primary health care, 2006



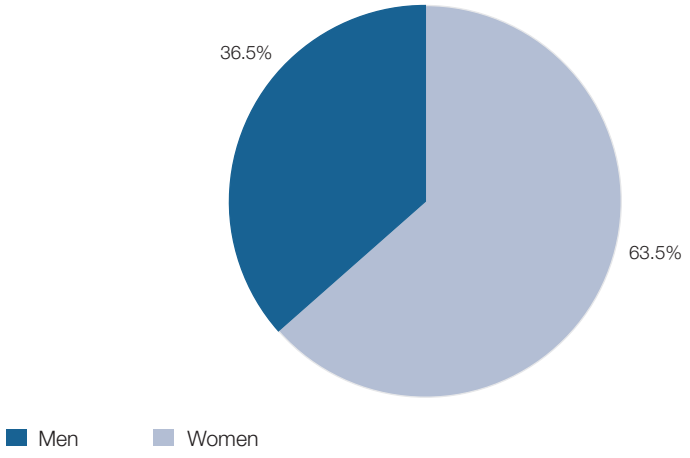
Created with data from Autonomous Communities, 2006

Figure 11: Nursing Professionals in primary health care, 2006



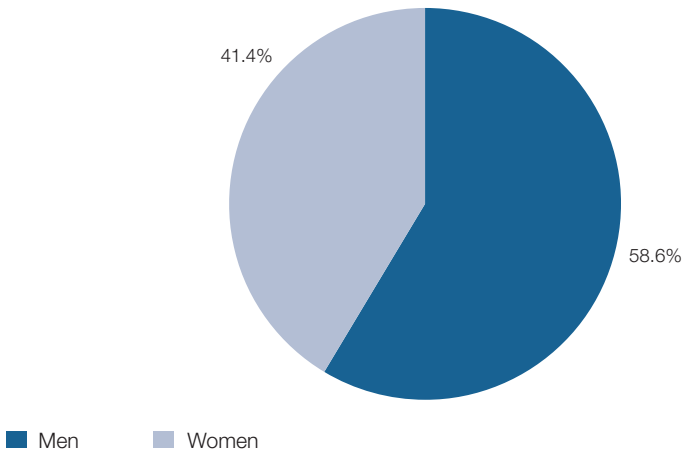
Created with data from Autonomous Communities, 2006

Figure 12: Professional Paediatricians in primary health care, 2006



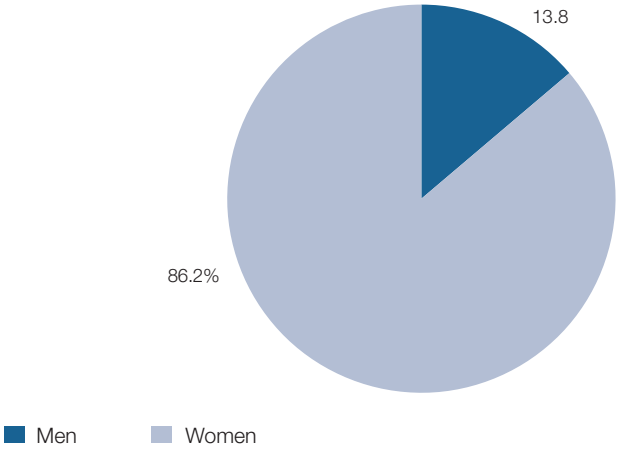
Created with data from Autonomous Communities, 2006.

Figure 13: Medical Professionals in specialised health care, 2006



Created with data from Autonomous Communities, 2006.

Figura 14: Nursing Professionals in specialised health care, 2006



Created with data from Autonomous Communities, 2006.

how this change in our society and workplace will affect the health sector and working conditions lean towards the need for preparation to accommodate greater demands in the future for reconciling work and family life, while others insist in a greater far-reaching change in the character and organization of responsibilities and health teams.

Public service and human resources in the health sector. Every country in the European Union has a welfare state which offers a wide range of health care coverage maintained with public finance, although they do not all regard those who work in this service in the same way. For some, they are public servants while for others they are workers employed in the service of a publicly funded company, but do not have the status of public sector workers. Finally, there are others who consider members of the medical and nursing professions as individual, independent workers or as employees within the social security system working for private companies under contract to the public administration or semi-public bodies[84].

The ways in which the organization of roles within the health system have settled in each state and territorial entity is a result of the interaction of social policies with current legislation, although moulded by the diverse

84 There are private health professionals in Spain, such as pharmacists, who play an important role in the public health service and who reach agreements, through the pharmaceutical colleges, to provide medicines and products which are prescribed and financed mostly by the public sector.

historical evolutions that have marked each country and the regions within them, giving rise to considerable differences.

There have been a number of recommendations over the years that personnel registers be created, at least for medical personnel and nursing staff, in order to tackle the problems arising when making comparisons between the Autonomous Communities.

Conformity with European directives (48 hours). The European directive 93/104, of the 23rd of November 1993, on the organization of working hours, is being applied progressively, signified and continues to signify an important change in the working hours of medical personnel, inasmuch as it limits the total number of hours to 48 in a week, affecting the time they can be on duty and the rest period between shifts, which must be at least 12 hours. Most analysts agree that its application has a direct correlation with the perceived shortage of human resources in the health services in recent years in many of the countries where it has been applied. However, the volume of resources required to cover the process of adaptation cannot be deduced straightforwardly because there are many differences between institutions in terms of their real application, and in practice may lead to a qualitative as well as quantitative transformation in the distribution of health roles.

One of the stages which is currently undergoing adaptation to the directive is that of the MIR (internal resident doctors).

Dangerousness. The analysis of dangerousness and the prevention of hazards in the workplace is progressing in most of the autonomous communities. One important factor in this is the increase in the number of attacks on health workers which has led many communities to develop specific protocols or registers of such aggressive acts. Aragon specifically mentions the creation of units for preventing occupational hazards: Castile and Leon has a Comprehensive Plan for Personnel Safety in Institutions of the Regional Health Board; the Health Service of Galicia has a plan for Prevention of Violence in the Workplace, there is a plan for the Canary Islands for the Prevention of Aggression against Workers in the Canary Islands Health Service[85].

Satisfaction. Although few of the Autonomous Communities have carried out studies of the level of satisfaction among their health personnel regarding their work, there is incomplete evidence that seems to suggest a growth in the so-called "burn-out syndrome" in the sector. The cause of their situation can be traced to many factors. The deterioration of the social position of the workers has been mentioned in this context, as well as the gaps between the goals set, which are always ambitious, for the principal tasks of the institutions

85 Other communities may have similar programmes which have not been explicitly mentioned in this section.

and their professionals, and the reality of the limited resources available. Then there are the shifts that have taken place in users' expectations, the nature of the work itself, the salaries and the low level of social and institutional recognition, etc.

Cantabria carried out its second survey in October 2006 to evaluate the working environment in all areas managed by the Cantabrian Health System. There was a greater level of satisfaction in primary care than among specialists, but there were many complaints in both areas about negative factors such as the lack of professional recognition and communication, inadequate pay and training. The group which was most dissatisfied was that of the orderlies. Galicia also carried out a survey to evaluate the factors of psycho-social risk and their effect on health, stress and satisfaction.

Basque Country has carried out a second cycle of measurements which will allow it to gauge the changes that have taken place during the period from 2001 to 2003. The medical schools of Catalonia performed a health survey, but limited only to doctors.

Current perceptions and available evidence for human resources planning. All of the Autonomous Communities have expressed concern over a possible deficit of medical professionals, the first symptom of which would be the growing difficulty in filling vacancies in certain specialised areas (anaesthesia, paediatrics and others[86]), in nursing positions, in geographically isolated areas, in unpopular timetables or other reasons and to cover the holiday period. The opinions that have emerged in different surveys attribute this to the following factors:

- Among the medical professions, the application of European directive 93/104 and the resulting reduction of effective working hours.
- Also among the medical profession, the feminization of the sector.
- The shortcomings of the human resources policies employed in recent years (precarious employment and temporary work).
- The attraction and growth in demand of the private sector.
- The attraction and growth in demand of the European labour market (especially in countries with higher rates of pay and more favourable working conditions).
- The professional demographics of the sector itself, with an important number of retirements in professions with difficulties in recruitment, especially among medical specialists

86 Other specialised areas mentioned in different reports include: in medicine (paediatric surgery, endocrinology, gynaecology and obstetrics, preventive medicine, odontology-stomatology, ophthalmology, radiodiagnostics, rheumatology, traumatology urology) and in nursing (midwives).

Planning. Some Autonomous Communities[87] mention that they have ordered studies on the availability of qualified medical personnel. It is important to underline that the available studies display a change from the vision prevalent in the last quarter of the previous century, which foresaw a supply that was more than sufficient, to a new vision of insufficiency which repeatedly draws attention to the shortage of professionals.

This is possibly the result of older studies which compared the relatively high number of Spanish graduates compared with other European countries, while more recent studies have been influenced by the difficulties in recruitment noted in all the Autonomous Communities and our European neighbours.

These planning studies have allowed us to deduce possible solutions, which are not without controversy[88], and which involve a) *the health system:* reform of primary care, reorganization of the functions of health professionals, reform of the emergency care system, the concentration of specialists, the increase of professional autonomy, introduction of telemedicine and advances in the use of unified clinical history; b) *the professionals:* greater flexibility concerning retirement, and improved incentives; c) *professional training:* increase access to the faculties and promote the application of the core studies plan as outlined in the Organization of the Medical Professions Act, and d) *the citizens:* promoting better use of the health system. In general, the planning of human resources is complicated by the fact that the impact of regulation only emerges in the long term, while the rate at which changes occur in the sector is greater because of technological, political and social transformations[89].

Actions currently in place. Among the actions which are under way, there are several initiatives aimed at analysing future requirements in human resources. Besides the examples in the previous section, Andalusia, Aragon

87 There may be similar studies in other Autonomous Communities which are not mentioned in the responses received. Mention should be made of the study "Demography of the health professions in Catalonia: analysis of the current stock of medical professionals" *Demografia de les professions sanitàries a Catalunya: anàlisi dels estocs actuals de professions sanitàries.* Barcelona: Centre of Demographic Studies, 2006 or the "Study of availability of qualified doctors in the coming decade" *Estudio de disponibilidad de facultativos en la próxima década* in Galicia and that of Amaya C and García MA, "Medical Demographics in Spain: Looking to the future" *Demografía médica en España.* Madrid: Fundación CESM (State Federation of Medical Unions), 2005.

88 See, for example, The Medial Profession Organization Committee. "The need for doctors in the Catalan Health System: causes and solutions" *La necessitat de metges en el sistema sanitari català: causes i solucions* (2007) accessed at: www.gencat.net/salut/depsan/units/sanitat/pdf/casfinal2007.pdf

89 González López-Valcárcel B. "Training and employment of health professionals in Spain: analysis of an imbalance" Formación y empleo de profesionales sanitarios en España: un análisis de desequilibrio. Gac Sanit 2000; 14 (3): 237-246.

and the Balearic Islands[90] have scheduled the preparation of plans for the organization of their human resources.

All public administrations are striving, in a broad sense, to increase the level of stability of public employees, introducing improvements in the process of contracting[91], quality and incentive plans. Besides these, two Autonomous Communities[92] (Galicia and the Basque Country) have made special mention of measures they have introduced to reconcile family life with working conditions.

Continuous Training. Table X contains a summary of the form adopted by the different autonomies within the National Health System for running their continuous training programmes. Most of the administrations aim to maintain a significant role in the organization and recognition of these courses by using public institutions which depend on the government of each autonomous community.

All the descriptions submitted coincide in that the health systems of the communities try to set up an initial phase in which to establish the training requirements, both for the professionals and those set out by the managers of the different institutions.

This in turn leads to the elaboration of an annual programme of continuous training with the participation of other social organizations and the unions. Some Autonomous Communities have created organs specifically for implementing these programmes.

Wages policy and incentives. All of the Autonomous Communities declare that they have established financial incentives to raise the level of quality, performance and training, or a plan of individual development and/or the meeting of negotiated targets through agreements with different agents, belonging to the unions, the administration or social representatives active in each community.

Table XI contains a summary of the agreements mentioned in the responses[93], [94].

The different titles used correspond with differences of type, quantity

90 This does not mean that other communities have not set up plans, but that they have not mentioned them in their responses.

91 New offers of public employment (OPE), both in the communities affected by the offer of 2001 from the former Insalud (Act 16/2001) as in those with an older transfer process.

92 Again, this does not imply that other communities have not made attempts, although not mentioned in their responses.

93 Sectorial Committee Agreement: Professional performance complement. The latest valid incentive agreement dates from 2006, from the Agreement of the 16th of May 2006, between the Andalusian Health Service and the unions represented in the health sector committee on personnel policy for the 2006-2008 period, and passed in the agreement of the 18th of July by the Government Council (Official Bulletin of the Government of Andalusia, No. 146, 31/07/2006).

94 *Health Profession Agreement: Specific bonuses,* productivity bonuses and continuous attention.

and the application policy followed in the incentives of each autonomous community. Any direct comparison of levels and wages policies between them is therefore a complex matter. Different analysts in different territories have suggested a variety of methods which lead to diverse conclusions. A review of these suggestions for tackling the problem would require a more detailed analysis that falls outside the scope of this report.

Table X: Institution or body specifically for continuous training, by autonomous community 2006

Autonomous community	Yes	No	No answer	Name
Andalusia	X			General Directorate of Quality, Research and Management of Knowledge Authorising Body
Aragon	X			Health Sciences Institute of Aragon
Asturias	X			Regional Council of Health and Social Security
Balearic Islands		X		
Canary Islands			X	
Cantabria			X	
Castile and Leon	X			School of Public Administration of the Community
Castile-La Mancha	X			Health Sciences Institute / Regional Administration School
Catalonia	X			Catalan Council for Continuous Training in the Health Professions
Valencian Community	X			EVES (Valencian School of Health Studies)
Extremadura	X			School of Health Science Studies
Galicia	X			FEGAS (Foundation of the Galician School of Health Administration)
Madrid	X			Laín Entralgo Agency
Murcia	X			General Directorate of Health Care Quality, Training and Research in coordination with the General Directorate of Human Resources
Navarre			X	
Basque Country		X		
Rioja	X			Rioja Health Foundation. Training Unit
Ingesa (Ceuta and Melilla)			X	
Total	**12**	**2**	**4**	

Created with data from Autonomous Communities, 2006.

Table XI: Current agreements on incentives in human resources, 2006

Autonomous community	Name given by each autonomous community	Year of last agreement
Andalusia	Sectorial Committee Agreement	2006
Aragon	Health Workers Agreement	2005
Asturias	None given	
Balearic Islands	None given	
Canary Islands	None given	
Cantabria	Union agreement	2004
Castile and Leon	Decree 121/2004	2004
Castile-La Mancha	Sectorial Committee of Health Institutions	2006
Catalonia	None given	
Valencian Community	Productivity agreement	2005
Extremadura	Agreement on careers and professional development	2005
Galicia	None given	
Madrid	None given	
Murcia	None given	
Navarre	Agreement on working conditions	2006
Basque Country	Agreement on Working Condition Regulations	2005
Rioja	Agreement for Service Workers in Rioja Health Service	2006
Ingesa (Ceuta and Melilla)	Agreement	1992

Created with data provided by Autonomous Communities, 2006.

However, there are opinions that call for greater equality between territories, while others defend the position that each community should adopt its own wages policy in accordance with its own situation and requirements.

Most of the responses refer principally to the complements applied to the medical profession. Other roles and professions within the health system have perceived this development as discriminatory, and they insist on the introduction of similar methods adapted to their roles, which have not yet been addressed.

The development of the policies of incentives has brought back some of the problems which have caused problems in the management of human resources for many years. For example, the incentives do not usually have any effect if the quantity that can be earned does not justify the effort that needs to be made, or if it does not compare with alternative earnings, such as the private sector can offer in some specialities in certain areas. The incentive may not have an effect if it is linked with results over which the worker does not have direct control, such as when it corresponds to a team or unit, and the

absence of an information system perceived to be fair and neutral impedes the measurement of the results which the incentive should be rewarding.

Different initiatives have been put forward to tackle these problems, such as the Andalusian solution where the workers enjoy personal access to their results in Internet.

The so-called 'professional paths' are considered by some as a policy of incentives. At present, all of the Autonomous Communities have set up (or are at an advanced stage of preparation[95]) their regional model, with its wages policy, periods of ineligibility, progression, reversibility and evaluation methods by means of a corresponding legal text. This continues to create disagreement between those who believe that each autonomy possesses the authority to design a model which is adjusted to its requirements, and those who call for greater standardisation across the nation. These paths, which were designed initially to distinguish between professional progress in the assignation of management responsibilities, which was the only activity with incentives in the past, are at risk of degenerating back to the traditional recognition of time served in a position. The recent debate on the subject of reversibility and the evaluation of the path, which varies between any two communities, is at the heart of this discussion.

Some Autonomous Communities mention policies which are not directly remunerative.

It is well-known that similar measures exist in all territories, but detailed analysis calls for a more specific study (for example in Aragon, the measurements of social action and the support for training are mentioned; in Castile and Leon, the guidelines of social action).

Tables XII and XIII show the distribution by specialities in the different health systems of the autonomous communities, where the relative deficits mentioned throughout this chapter can be seen objectively[96], [97].

95 Ingesa (Ceuta and Melilla) has not yet established the career model for this profession.

96 "Other specialisations", in table 12, may include (depending on the Autonomous Community): admissions and clinical documentation, filing, experimental surgery, radiology, faculty directors, embryology, hospital pharmacology, research, family and community medicine , odontology-stomatology, paediatrics, clinical psychology, chemistry, radiopharmacy, radiophysics, radioprotection, radiotherapy and emergency care.

97 "Other specialisations", in table 13, may include (depending on the Autonomous Community): admissions and clinical documentation, filing, experimental surgery, radiology, faculty directors, embryology, hospital pharmacology, research, family and community medicine, odontology-stomatology, paediatrics, clinical psychology, chemistry, radiopharmacy, radiophysics, radioprotection, radiotherapy and emergency care. Obviously, there are differences in the classification of these specialists, which explains the great disparity in their numbers. regarding the data from Catalonia, see previous notes.

Table XII: Number of professionals by medical specialisation, 2006

	Aragon	Asturias	Balearic Islands	Canary Islands	Castile and Leon	Castile-La Mancha	Catalonia	Valencian Community	Extremadura	Galicia	Madrid	Murcia	Navarre	Basque Country	Rioja	Ingesa (Ceuta and Melilla)	Total
Allergy treatment	10	4	0	32	30	24	79	45	18	25	74	20	8	17	5	0	**391**
Clinical analysis	48	40	39	51	131	89	112	152	53	172	242	49	18	72	13	7	**1,288**
Anatomical pathology	42	37	26	34	78	50	171	99	29	92	148	36	20	45	8	4	**919**
Anasthesiology and reanimation	141	135	70	112	279	189	688	426	152	336	685	685	74	229	27	9	**3.682**
Angiology and vascular surgery	17	21	4	14	31	19	116	23	11	53	58	3	3	26	5	1	**405**
The digestive apparatus	43	39	30	34	103	80	300	161	38	98	231	49	25	82	12	3	**1,328**
Clinical Biochemistry	44	36	1	9	9	14	53	10	3	0	77	9	4	26	0	0	**295**
Cardiology	55	47	39	50	115	91	321	178	56	149	289	63	28	96	13	4	**1,594**
Cardiovascular surgery	7	0	6	4	14	5	47	22	8	21	61	10	8	17	0	0	**230**
General surgery and of the digestive apparatus	113	105	86	72	230	151	634	344	101	225	429	120	47	177	27	10	**2,871**
Maxillofacial surgery	7	8	6	9	13	15	63	25	7	20	68	11	7	12	0	0	**271**
Paediatric surgery	13	8	8	14	10	7	63	27	11	37	69	13	5	3	0	0	**288**
Thoracic surgery	6	0	29		11	3	146	16	4	17	32	4	0	8	2	0	**260**
Plastic and reconstructive surgery	9	10	4	10	27	8	28	25	6	37	68	9	4	21	1	0	**267**
Medical and surgical dermatology and venereology	30	23	20	23	67	45	253	98	20	71	135	25	13	40	8	2	**873**
Endocrinology and nutrition	23	25	15	28	55	39	188	74	22	59	140	26	13	41	6	2	**756**
Stomatology	0	0	1	5	77	0	575	7	0	0	11	2	0	44	0	0	**722**
Clinical Pharmacology	8	26	21	0	2	4	48	7	28	3	97	0	13	14	0	0	**271**
Geriatrics	16	10	2	1	13	30	70	5	5	20	30	2	3	0	2	0	**209**
Haematology and haemotherapy	43	31	29	44	109	63	214	132	39	103	66	44	23	72	10	5	**1,027**
Hydrology	0	0	0	0	0	0	3	0	0	0	172	0	0	0	0	0	**175**
Immunology	1	5	4	2	3	3	23	2	6	10	0	7	0	4	0	0	**70**
Occupational health	7	5	2	1	12	15	549	0	9	0	42	6	4	25	2	2	**681**
Medicine for physical education and sport	0	0	0	0	0	0	139	0	0	0	27	0	0	0	0	0	**166**
Intensive care medicine	62	67	39	53	103	86	176	180	43	124	140	58	22	44	6	11	**1,214**
Internal medicine	85	90	66	61	258	143	799	227	98	302	401	94	46	99	21	10	**2,800**
Forensic medicine	0	0	0	0	0	0	26	0	0	10	0	0	0	0	0	0	**36**

	Aragon	Asturias	Balearic Islands	Canary Islands	Castile and Leon	Castile-La Mancha	Catalonia	Valencian Community	Extremadura	Galicia	Madrid	Murcia	Navarre	Basque Country	Rioja	Ingesa (Ceuta and Melilla)	Total
Nuclear medicine	7	11	3	5	17	8	53	22	7	0	60	6	4	10	2	0	**215**
Preventive medicine and public health	16	8	5	10	25	12	87	37	7	50	48	6	17	16	4	0	**348**
Microbiology and parasitology	36	32	18	18	51	30	74	86	19	61	134	20	8	43	3	3	**636**
Nephrology	27	26	15	27	64	39	149	102	22	69	101	28	7	33	7	2	**718**
Pneumology	40	67	30	32	76	57	209	127	24	83	169	28	14	76	11	4	**1,047**
Neurosurgery	14	13	6	15	28	15	56	37	10	39	75	9	6	25	0	1	**349**
Clinical Neurophysiology	12	11	2	6	29	17	43	47	10	39	56	13	9	16	3	0	**313**
Neurology	31	36	31	32	65	50	233	111	27	80	153	42	18	59	9	4	**981**
Obstetrics and gynaecology	121	121	90	109	237	165	898	344	99	245	506	114	62	186	33	13	**3,343**
Ophthalmology	84	67	48	45	170	114	501	236	77	170	328	75	34	113	20	6	**2,088**
Medical Oncology	13	15	19	14	38	34	115	60	22	54	91	19	6	23	8	0	**531**
Oncological Radiotherapy	15	30	5	26	22	8	47	21	7	0	65	8	6	21	2	0	**283**
Otorhinolaryngology	57	39	38	47	132	80	294	184	59	117	217	62	24	91	14	5	**1,460**
Psychiatry	87	61	68	63	149	105	700	173	44	195	461	88	35	210	15	4	**2,458**
Radiodiagnostics	128	97	59	73	203	140	334	268	97	246	460	74	53	151	32	5	**2,420**
Rehabilitation	31	38	40	34	58	70	0	113	22	62	138	28	20	57	10	1	**722**
Rheumatology	19	11	6	17	29	27	177	53	13	36	106	23	5	21	6	3	**552**
Orthopaedics and Orthopaedic surgery	95	111	86	81	232	148	771	357	99	236	449	98	63	197	20	9	**3,052**
Urology	63	50	36	34	110	79	227	172	52	90	193	45	25	78	13	2	**1,269**
Other specialisations	152	0	0	118	584	0	0	0	222	830	758	441	0	0	0	0	**3,105**
TOTAL	1.878	1.616	1.125	1.478	4.092	2.371	10.852	4.835	1.706	4.686	8.360	2.017	804	2.640	380	132	49.972

Table XIII: Number of professionals (for 100,000 inhabitants) in specialised care, by specialisation, 2006

	Aragon	Asturias	Balearic Islands	Canary Inslands	Castile and Leon	Castile-La Mancha	Cataluña	Valencian Community	Extremadura	Galicia	Madrid	Murcia	Navarre	Basque Country	Rioja	Ingesa (Ceuta and Melilla)	Total
Allergy treatment	0.8	0.4	0.0	1.6	1.2	1.2	1.1	0.9	1.7	0.9	1.2	1.5	1.3	0.8	1.6	0.0	**1.1**
Clinical analysis	3.8	3.7	3.9	2.6	5.2	4.6	1.6	3.2	4.9	6.2	4.0	3.6	3.0	3.4	4.2	4.9	**3.6**
Anatomical pathology	3.3	3.4	2.6	1.7	3.1	2.6	2.4	2.1	2.7	3.3	2.5	2.6	3.3	2.1	2.6	2.8	**2.5**
Anaesthesiology and reanimation	11.0	12.5	7.0	5.6	11.1	9.8	9.6	8.9	14.0	12.1	11.4	9.5	12.3	10.7	8.8	6.3	**10.2**
Angiology and vascular surgery	1.3	2.0	0.4	0.7	1.2	1.0	1.6	0.5	1.0	1.9	1.0	0.2	0.5	1.2	1.6	0.7	**1.1**
The digestive apparatus	3.4	3.6	3.0	1.7	4.1	4.1	4.2	3.3	3.5	3.5	3.8	3.6	4.2	3.8	3.9	2.1	**3.7**
Clinical biochemistry	3.4	3.3	0.1	0.5	0.36	0.7	0.7	0.2	0.3	0.0	1.3	0.7	0.7	1.2	0.0	0.0	**0.8**
Cardiology	4.3	4.4	3.9	2.5	4.6	4.7	4.5	3.7	5.2	5.4	4.8	4.6	4.7	4.5	4.2	2.8	**4.4**
Cardiovascular surgery	0.5	0.0	0.6	0.2	0.6	0.3	0.7	0.5	0.7	0.8	1.0	0.7	1.3	0.8	0.0	0.0	**0.6**
General surgery and of the digestive apparatus	8.8	9.8	8.6	3.6	9.2	7.8	8.9	7.2	9.3	8.1	7.1	8.8	7.8	8.3	8.8	7.0	**7.9**
Maxillofacial surgery	0.5	0.7	0.6	0.5	0.5	0.8	0.9	0.5	0.6	0.7	1.1	0.8	1.2	0.6	0.0	0.0	**0.7**
Paediatric surgery	1.0	0.7	0.8	0.7	0.4	0.4	0.9	0.6	1.0	1.3	1.1	0.9	0.8	0.1	0.0	0.0	**0.8**
Thoracic surgery	0.5	0.0	0.2	0.5	0.4	0.2	2.0	0.3	0.4	0.6	0.5	0.3	0.0	0.4	0.7	0.0	**0.7**
Plastic and reconstructive surgery	0.7	0.9	0.4	0.5	1.1	0.4	0.4	0.5	0.6	1.3	1.1	0.7	0.7	1.0	0.3	0.0	**0.7**
Medical and surgical dermatology and venereology	2.3	2.1	2.0	1.2	2.7	2.3	3.5	2.0	1.8	2.6	2.2	1.8	2.2	1.9	2.6	1.4	**2.4**
Endocrinology and nutrition	1.8	2.3	1.5	1.4	2.2	2.0	2.6	1.5	2.0	2.1	2.3	1.9	2.2	1.9	2.0	1.4	**2.1**
Stomatology	0.0	0.0	0.1	0.3	0.0	0.0	8.1	0.1	0.0	0.0	0.2	0.1	0.0	2.1	0.0	0.0	**1.8**
Clinical Pharmacology	0.6	2.4	2.1	0.0	0.1	0.2	0.7	0.1	2.6	0.1	1.6	0.0	2.2	0.7	0.0	0.0	**0.7**
Geriatrics	1.3	0.9	0.2	0.1	0.5	1.6	1.0	0.1	0.5	0.7	0.5	0.1	0.5	0.0	0.7	0.0	**0.6**
Haematology and haemotherapy	3.4	2.9	2.9	2.2	4.3	3.3	3.0	2.7	3.6	3.7	1.1	3.2	3.8	3.4	3.3	3.5	**2.8**
Hydrology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	**0.5**
Immunology	0.1	0.5	0.4	0.1	0.1	0.2	0.3	0.0	0.6	0.4	0.0	0.5	0.0	0.2	0.0	0.0	**0.2**
Occupational health	0.5	0.5	0.2	0.1	0.5	0.8	7.7	0.0	0.8	0.0	0.7	0.4	0.7	1.2	0.7	1.4	**1.9**
Medicine for physical education and sport	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	**0.5**

	Aragon	Asturias	Balearic Islands	Canary Inslands	Castile and Leon	Castile-La Mancha	Cataluña	Valencian Community	Extremadura	Galicia	Madrid	Murcia	Navarre	Basque Country	Rioja	Ingesa (Ceuta and Melilla)	Total
Intensive care medicine	4.9	6.2	3.9	2.7	4.1	4.5	2.5	3.7	4.0	4.5	2.3	4.2	3.7	2.1	2.0	7.7	**3.4**
Internal medicine	6.7	8.4	6.6	3.1	10.2	7.4	11.2	4.7	9.0	10.9	6.7	6.9	7.6	4.6	6.9	7.0	**7.8**
Forensic medicine	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Nuclear medicine	0.5	1.0	0.3	0.3	0.7	0.4	0.7	0.5	0.6	0.0	1.0	0.4	0.7	0.5	0.7	0.0	**0.6**
Preventive medicine and public health	1.3	0.7	0.5	0.5	1.0	0.6	1.2	0.8	0.6	1.8	0.8	0.4	2.8	0.7	1.3	0.0	**1.0**
Microbiology and parasitology	2.8	3.0	1.8	0.9	2.0	1.6	1.0	1.8	1.7	2.2	2.2	1.5	1.3	2.0	1.0	2.1	**1.8**
Nephrology	2.1	2.4	1.5	1.4	2.5	2.0	2.1	2.1	2.0	2.5	1.7	2.0	1.2	1.5	2.3	1.4	**2.0**
Pneumology	3.1	6.2	3.0	1.6	3.0	2.9	2.9	2.6	2.2	3.0	2.8	2.0	2.3	3.6	3.6	2.8	**2.9**
Neurosurgery	1.1	1.2	0.6	0.8	1.1	0.8	0.8	0.8	0.9	1.4	1.2	0.7	1.0	1.2	0.0	0.7	**1.0**
Clinical Neurophysiology	0.9	1.0	0.2	0.3	1.1	0.9	0.6	1.0	0.9	1.4	0.9	0.9	1.5	0.7	1.0	0.0	**0.9**
Neurology	2.4	3.3	3.1	1.6	2.6	2.6	3.3	2.3	2.5	2.9	2.5	3.1	3.0	2.8	2.9	2.8	**2.7**
Obstetrics and gynae-cology	9.5	11.2	9.0	5.5	9.4	8.5	12.6	7.2	9.1	8.9	8.4	8.3	10.3	8.7	10.8	9.1	**9.2**
Ophthalmology	6.6	6.2	4.8	2.3	6.7	5.9	7.0	4.9	7.1	6.1	5.5	5.5	5.6	5.3	6.5	4.2	**5.8**
Medical oncology	1.0	1.4	1.9	0.7	1.5	1.8	1.6	1.2	2.0	2.0	1.5	1.4	1.0	1.1	2.6	0.0	**1.5**
Oncological radiotherapy	1.2	2.8	0.5	1.3	0.9	0.4	0.7	0.4	0.6	0.0	1.1	0.6	1.0	1.0	0.7	0.0	**0.8**
Otorhinolaryngology	4.5	3.6	3.8	2.4	5.2	4.1	4.1	3.8	5.4	4.2	3.6	4.5	4.0	4.3	4.6	3.5	**4.0**
Psychiatry	6.8	5.7	6.8	3.2	5.9	5.4	9.8	3.6	4.1	7.0	7.7	6.4	5.8	9.8	4.9	2.8	**6.8**
Radiodiagnostics	10.0	9.0	5.9	3.7	8.0	7.2	4.7	5.6	8.9	8.9	7.7	5.4	8.8	7.1	10.4	3.5	**6.7**
Rehabilitation	2.4	3.5	4.0	1.7	2.3	3.6	0.0	2.4	2.0	2.2	2.3	2.0	3.3	2.7	3.3	0.7	**2.0**
Rheumatology	1.5	1.0	0.6	0.9	1.1	1.4	2.5	1.1	1.2	1.3	1.8	1.7	0.8	1.0	2.0	2.1	**1.5**
Orthopaedics and orthopaedic surgery	7.4	10.3	8.6	4.1	9.2	7.7	10.8	7.4	9.1	8.5	7.5	7.2	10.5	9.2	6.5	6.3	**8.4**
Urology	4.9	4.6	3.6	1.7	4.4	4.1	3.2	3.6	4.8	3.3	3.2	3.3	4.2	3.7	4.2	1.4	**3.5**
Other specialisations	11.9	0.0	0.0	5.9	25.8	0.0	0.0	0.0	20.4	30.0	12.6	32.2	0.0	0.0	0.0	0.0	**8.8**
TOTAL	**147.0**	**150.1**	**112.4**	**74.1**	**162.2**	**122.7**	**152.1**	**100.6**	**157.0**	**169.3**	**139.1**	**147.2**	**133.6**	**123.7**	**124.0**	**92.5**	**135.4**