

European Paediatric Neurology Training Advisory Board

Report nr 11

EVALUATION OF THE PAEDIATRIC NEUROLOGY TRAINING IN SPAIN, 16-19 October 2012

Visiting team: Nina Barisic, Coriene Catsman, Dana Craiu, Lars Palm

Approved by the Training Advisory Board: December 13, 2012

Chair: Dana Craiu



Conf. Dr. DANA CRAIU
Medic Primar Neurologie Pediatrie
Cod 816948

CAN delegates: Francisco Carratala, Dana Craiu, José-Carlos Ferreira, Heikki Rantala

EPNS Education and Training Committee delegates: Coriene Catsman-Berrevoets, Colin Kennedy, Richard Newton, Lars Palm

President EPNS: Lieven Lagae

Secretary EPNS: Peter Baxter

Coopted EPNS Board Member for this visit: Nina Barisic

Recommendations

We strongly support the Spanish Paediatric Neurologist united in SENEP in their endeavours to achieve **official recognition of Paediatric Neurology as a (sub) specialty**

The care for children with neurological disease should be provided by specialists well trained in Paediatric Neurology

The Spanish PN curriculum is already based on the European syllabus. However, care should be taken to enable participation for the required time in the other mother specialty.

Exposure and active participation in research is an important part of PN training and should be given merited value.

SENEP is suggested to set up a system of continuous education for established paediatric neurologists and other specialists working in this field

Training in child- and adolescent psychiatry as well as neurodisability should be part of paediatric neurology training.

In the long run the workload must be limited by increasing the staff or decreasing the number of patients.

Introduction

In 2002 Paediatric Neurology (PN) was accepted on the European level as a subspecialty of Paediatrics as well as of Neurology. In the process of the definition of the specialty a European training programme, the syllabus of Child Neurology, was compiled and accepted by the European Paediatric Neurology Society (EPNS) and by the Committee of National Advisors in Child Neurology (CNA). As a means to implement the syllabus in the training of Child Neurology specialists in the European countries, the EPNS and the CNA in 2004 agreed to set off a Training Advisory Board (TAB) as a joint effort. The TAB includes four delegates from the CNA, four from the EPNS' Education and Training Committee, the president and secretary of the EPNS. Delegates of the European Academy of Childhood Disability and the UEMS Neurology board are both also represented. The TAB is chaired by the chairperson of the CNA.

TAB offers to national child neurology societies the opportunity to work together with them to evaluate the national training system. The ultimate aim is that the trainees of each European country reach a quality of training that is in accordance with the European training programme as defined by the Syllabus.

The Spanish Paediatric Neurology Society (SENEP – www.senep.es) through their representation in the CNA requested an evaluation by TAB of the child neurology training in Spain in accordance with this aim.

The visit needs to be followed in about 1 year by a report from the Spanish group.

Demographics and medical care

The Spanish population is estimated at over 47 million inhabitants. The number of children and adolescents < 14 years of age is about 7 million children (in general, children > 14 years are referred to paediatric neurology if their disease starts before 14 years and to adult neurology if it starts over 14 years, although this can vary depending on Regional Health Organization). At present the population is not growing (natality – 1.47/woman in the fertile age).

The Spanish health care is based on a social security system. There is a universal free of charge health care for children under the age of 14 years and 11 month. 95% of the Spanish insurances are public. There are also private insurance solutions but they may not cover some disorders depending on aetiology (genetic, etc).

There are 17 autonomous regions and 2 independent municipal regions (Ceuta and Melilla) with their own political, administrative and health care systems. The health care administration has been transferred from the central government to these autonomous regions. In contrast, medical education and requirements of specialist training such as for Paediatrics and Neurology are under the responsibility of a National Board of Professional Accreditation.

The TAB team visited several big paediatric or general hospitals that offer paediatric neurology care and training in Madrid, Zaragoza and Barcelona. In these centers also, a sample of representatives of other distant hospitals in the regions presented the figures of their centers.

Facilities for paediatric neurological care including wards, outpatient facilities, intensive and neonatal care, laboratories (biochemical, metabolic, genetic) as well as imaging are included

(integrated) in paediatric care and are well developed. Physiotherapy for children and adults are integrated. The units are well equipped.

Visit organization

Pre-visit evaluation documents were sent to Spanish hosts three months before the visit. The completed pre-visit evaluation documents were sent back to TAB team with information from most PN training centers. Information was also obtained from the presentations at site and from discussions with participants to the meetings (see for participants and the hospitals they represented Table 1) The National training assessment inquiry was also filled in and sent back by Francisco Carratala (CNA Spanish representative and main host of the visit).

The visit to Spain was made 16-19 October 2012 by Nina Barisic, Coriene Catsman-Berrevoets, Dana Craiu and Lars Palm.

TAB team and hosts decided together to visit 3 main cities representing the most densely populated areas of Spain (Madrid, Zaragoza, Barcelona) where representatives from training centers of about 80% of Spanish territory met the TAB team (Table 1). During visits, the hosts offered presentations of the centers of training.

Madrid: In Madrid the team visited Hospital Niño Jesus Madrid and the Hospital Universitario Fundacion Alcoron.

In the Hospital Niño Jesus Madrid we were kindly received by officials of SENEP: Dra Ruiz-Falco, President of SENEP, Dr Lopez Pison, Secretary of SENEP, Dra Susana Roldan, board member of SENEP and Dr Caratala, vocal of SENEP.

Presentations came from representatives of Hospital Niño Jesus Madrid, the Hospital Universitario Fundacion Alcoron, the Hospital Virgen de las Nieves in Granada, Hospital Reina Sofia in Cordoba and the Hospital Virgen de la Salud in Toledo.

Zaragoza: In Zaragoza we visited the Hospital Universitario Miguel Servet and also met representatives from the Hospital Universitario Central de Asturias in Oviedo, the Complejo Hospitalario de Navarra in Pamplona and the Clínica Universidad de Navarra in Pamplona.

Barcelona: In Barcelona we were received in Hospital Universitario San Juan de Deu and also visited Hospital Universitario/Consocio Sanitario Parc Tauli de Sabadell. In addition we met representatives from the Val d'Hebron University Hospital in Barcelona and the Hospital Son Llatzer in Palma de Mallorca. Our host dr Francisco Carratala explained paediatric neurology training in the Hospital Universitario San Juan in Alicante, and introduced some data from the Valencian Community.

In Table 2, information on organization of the above mentioned centres acquired from the pre-visit questionnaires is summarised.

Paediatric Neurology in Spain

Paediatric Neurology in Spain is not officially recognised as a separate specialty or subspecialty of Paediatrics or Neurology. In the Ministry of health the General Board of Professional Regulation decides which specialties will be developed. There are no clear rules on how these specialties are chosen. At present, only neonatology would be considered a subspecialty of Paediatrics.

Paediatric Neurologists are employed by Departments of Paediatrics. There is no formal need for specialist training in Paediatric Neurology to work as a child neurologist. The head of the department establishes the need /number of PN specialists, but may also decide to employ an untrained paediatrician to work as a PN.

A Spanish Society of PN called Sociedad Española Neurologia Pediatrica (SENEP) was created in 1993. SENEP accredits the centers and the specialists in PN with the consent of the Societies of Paediatrics and Neurology. After two years of training of PN in an accredited center PN may become members of SENEP. At present SENEP counts approximately 300 members that are considered specialists in PN. Approximately 50% of them are full member of SENEP. To become full member of SENEP one needs: Paediatrics or Neurologist qualification (4 years). Two years in Neuropaediatrics formation in a Hospital with Accreditation for Training in Neuropaediatrics and two or more publication in neuropaediatric in congress

Full accreditation as Paediatric Neurologist by AEP (Spanish Paediatric Asociation) and SEN (Spanish Neurology Society) requires:

SENEP recognition and membership and 5 years of practice as PN. This counts up to 11 years of training after medical school to become a fully accredited paediatric neurologist in Spain.

These numbers indicate that the relation between paediatric population and specialists in paediatric neurology is approximately 23.333 children/ accredited paediatric neurologist. At present approximately 40 paediatricians and a few neurologists are in training to become a specialist in PN.

Paediatric Neurology Training

After medical school, a national exam (MIR) has to be successfully concluded. Students tend to spend 1 year to prepare it. Specialty and training hospital may be chosen according to the grades obtained.

Specialist training in PN follows after full specialisation in general Paediatrics or Neurology. Entrance from Neurology is used in a minority. Residents in Paediatrics or Neurology spend 2-6 months in Paediatric Neurology, but this rotation is not mandatory. The official training period is four years for general paediatrics or neurology and two additional years for PN. The total training time of Paediatric Neurologists is six years. One year of Paediatric Neurology can also count as Paediatric training which may shorten the training to a total of five years.

In the Sant Joan de Deu Hospital and the Vall d'Hebron University Hospital in Barcelona a slightly different training scheme is used. In these centers a 2-year structured Paediatric Neurology training program is offered to young Paediatricians or Neurologists in a Master program which was set up in conjunction with the University of Barcelona and the Universidad Autónoma de Barcelona. In these programs, active participation in research is mandatory. In these hospitals and the 2-year Paediatric Neurology training program can be extended with a 2 year PhD program.

Training in Paediatric Neurology is allowed only in accredited centers. There are 22 full training and 8 partial training accredited centers out of 660 public hospitals in Spain. Center accreditation is performed by SENEP following certain criteria.

Tutoring – there is no formal tutoring for Paediatric Neurology trainees.

Position and payment - Residents that are being trained in recognized specialisms, such as Paediatrics or Neurology receive a salary. However, because Paediatric Neurology is not recognized as a speciality, trainees are not employed or paid for the work they do in the Paediatric Neurological units. Because these young medical specialists do not have a formal relationship with the hospitals and are considered formally as students, all their actions and

prescriptions need to be signed by a staff member of the hospital. In the Barcelona Master Programs, the University requires an additional yearly entrance fee of 1800 Euro. Another major problem is that the time spent in Paediatric Neurology training does not count as specialised working time merit, as opposed to training in officially recognised specialties

Training program - A Spanish syllabus for Paediatric Neurology training has been developed following the European Syllabus as guide line.

The training program in Spain (2 years) recommends in- and out-patient training with rotations for: adult neurology (for those coming from paediatrics, duration is variable from center to center from 1 to 6 month), neuroradiology (1month each), rehabilitation (1-3 months), neurophysiology (3 months). Training programme may differ from one center to another as also the number and duration of rotations. Same rotation may be accomplished differently in different centers.

Although not clearly specified in the training programme, neurodisability training (including work in a multidisciplinary team) is integrated in day to day work. Basic training in Paediatrics is not required for those coming from Neurology but is sometimes done on voluntary bases for 3 months.

Child psychiatry is not included in training in all centers. Management of disability is sometimes in the hands of adult rehabilitation specialists with additional paediatric training. However when they are not present in a center the paediatric neurologists manage these patients and the multidisciplinary team required. For this reason the exposure to disability clinics also varies among centers.

Trainees are exposed during their PN training to acute and chronic paediatric neurology including intensive and neonatal care during their in and outpatient daily work and night shifts.

Paediatrician PN trainees are not on call in their training hospitals, because their lack of formal relationship with the hospital. However, they almost all do outpatient clinics and call duties in other hospitals for general paediatrics or neurology dependent from the mother specialism after the formal working hours, in order to earn a living. This results in extremely overburdened week schemes and loss of focus for the paediatric neurology training.

Doctors in training - as medical specialists- do not perform routine tasks like intra-venous blood sampling and needles for intra-venous lines (these are performed by nurses). Lumbar punctures or skin biopsies may be performed by PN trainees under supervision. PN cases examination, decisions on investigations and treatment are made by PN trainees under supervision of a fully

trained P paediatric neurologist. Only when on duty in the emergency room, PN trainees are allowed to act without supervision.

SENEP offers to paediatric neurology residents 5 grants annually for research projects. Trainees tend to use these grants mostly as a salary for the unpaid (second) year(s) of PN training. Publications and conference presentations emerge from their research work.

After graduation, trainees may not find a position as a Pediatric Neurologist and may be employed (in part) in another subspecialty of paediatrics.

Postgraduate training and research

The basic scientific degree is the Ph.D. However, this degree is not appreciated in all centers. The feeling of trainees in some centers is that it does not help in a career as PN, but is only necessary for achieving an academic career.

No system of continuous education for established paediatric neurologists and other specialists working in this field exists although individual initiatives here to in several centers are documented.

Conclusions and comments

Strong points

1. Visible and active paediatric neurology society that took the initiative for a structured and qualitatively good training for Paediatric Neurology which is formally accredited and recognized by the Paediatric and Neurology associations of Spain.

2. Hospitals are well organized and well equipped. Paediatric neurology units have access to modern neuroradiology and genetic and biochemical facilities. Trainees are well exposed to them. In case of missing essential training facilities a center is awarded as a partial accredited training center. Trainees rotate for the missing part of their training to other centers.

Weak points

Paediatric Neurology in Spain is not a recognized (sub)-speciality of Paediatrics or Neurology. This causes multiple weak links in the training of residents, employment of Paediatric Neurologists and the care for children with neurological problems in general.

- Paediatrics Neurology residents do not receive salaries during their training and are unable to develop an independent working attitude due to continued dependency of staff members.
- Paediatric Neurologists may be forced by hospital management to work in other subspecialties of paediatrics
- The care of children with neurological problems can be handled by paediatricians or neurologists who are not properly trained for the job, or even worse are trained in other paediatric subspecialties. No information is available on the extent neither of this practise nor on the quality of care. For these colleagues no structured schooling is available. This practice to expose children with neurological disease to untrained doctors may easily lead to misdiagnosis, wrong treatments and higher expenses to the health system.

Neurology training for PN trainees from paediatrics is often too short or non-existent (advised 6 months according to the syllabus). The same holds true for the neurologists in training for their basic rotation of general paediatrics (advised 2 years according to the syllabus).

The exposition to multidisciplinary neurodisability care is varying throughout Spain. A solid knowledge of this field is recommended in the European syllabus.

Recommendations

We strongly support the Spanish Paediatric Neurologist united in SENEP in their endeavours to achieve **official recognition of Paediatric Neurology as a (sub) specialty**

The care for children with neurological disease should be provided by specialists well trained in Paediatric Neurology

The Spanish PN curriculum is already based on the European syllabus. However, care should be taken to enable participation for the required time in the other mother specialty.

Exposure and active participation in research is an important part of PN training and should be given merited value.

SENEP is suggested to set up a system of continuous education for established paediatric neurologists and other specialists working in this field

Training in child- and adolescent psychiatry as well as neurodisability should be part of paediatric neurology training.

In the long run the workload must be limited by increasing the staff or decreasing the number of patients.

Feedback

A feedback-report to the Training Advisory Board is expected from the Spanish

Paediatric Neurology Society within the year 2014.

Subjects to be brought up in the feedback, amongst other subjects, are:

Debates and considerations made after the evaluation and this report,

Actions taken or planned as to training structure and tutoring, including the lack of sub-modules in neurology and child-and youth psychiatry,

Steps taken to enforce an increased training in paediatric neurology.

Zagreb/Rotterdam/Bucharest/Malmo December 2012

Nina Barisic/ Coriene Catsman/ Dana Craiu/ Lars Palm

Acknowledgement:

We thank Nina Barisic for participating and contributing in TAB work for the Spain visit.

Table 1: Representatives of the different hospitals discussing the situation in their hospitals with TAB visiting team

City/ Region	Accreditation of the training center by SENEP	Paediatric Neurologists present at site visit
MADRID and South of Spain		
Hospital Niño Jesús Madrid	Fully accredited	Dra. M.L.Ruiz Falcó, Dr. L Gutierrez Solana, Dr. J.J. Garcia Peñas, Dra. A. Duat, Dra. K. Lopez Marin, Dra. V. Cantarin, Dra. L.Calleja Gero
Hospital Universitario Fundación Alcorcón (Madrid)	Partially accredited	Dra. Garcia Perez
Hospital Reina Sofia Córdoba (Andalucía)	Partially accredited	Dr. E. Lopez Laso
Hospital Toledo (Castilla de la Mancha)	Partially accredited	Dr. A. Verdú
Hospital Virgen de las Nieves (Granada, Andalucía)	Fully accredited	Dra S. Roldan
Zaragoza and North of Spain		
Hospital Universitario Miguel Servet (Zaragoza)	Fully accredited	Dr. J. López Pisón, Dra. L. Monge Galindo, Dr. J.L. Peña Segura, Dra P. Abenia Usón
Hospital Universitario Central de Asturias (Oviedo)	Partially accredited	Dr. I. Málaga Diéguez
Complejo Hospitalario de Navarra (Pamplona)	Partially accredited	Dr. S. Aguilera Albesa
Clínica Universidad de Navarra I (Pamplona)	Partially accredited	Dra. Sánchez- Carpintero-Abad
Barcelona and East coast region		
Hospital Universitario San Juan de Deu (Barcelona)	Fully accredited	Dr J. Campistol
Hospital Universitario/Consocio Sanitario Parc Tauli (Sabadell, Catalunya).	Partially accredited	Dra. I. Lorente Hurtado
Val d'Hebron University Hospital (Barcelona)	Fully accredited	Dr. A. Macaya, Dra M. del Toro, Dr M. Raspall. Dra F. Munell, Dra S. Boronat, Dr M. Roig
Hospital Son Llatzer (Palma de Mallorca)	Partially accredited	Dra Esther Cardo Jalon
Universitario San Juan (Alicante)	Partially accredited	Dr F.Carratala

Table 2: Summary of the pre-visit questionnaires concerning the Spanish hospitals visited

Region: Central /South Spain	Madrid Autonomous Community	Madrid Autonomous Community	Andalucia Autonomous Community	Andalucia Autonomous Community	Castilla/La Mancha Autonomous Community
	Madrid	Alcoron City	Granada	Cordoba	Toledo
Hospital	HNJM	HUFA	HVNG	HRSC	HVS
Inhabitants	6 489 680 hab.	175000/6 489 680 hab.	8.424.102 hab	8.424.102 hab	2.115.334 hab
Children	? Tertiary Referral	22.000		200.000	200.000
Staff					
Paediatric Neurologists (SENEP)	7(4)	2 (1)	2 (1)	3(2)	2 (1)
General Paediatricians ⁷					
Specialized nurse	2		1	1	
(neuro) psychologist	3	2	4	2	
Beds total					80
Ear marked PN beds	yes	no	no	no	no
Associated departments					
Neurophysiology EEG	Yes: 3 1/2	Yes: 2	Yes; 2 1/2	Yes; 2	Yes; 1
Neurophysiology EMG	Yes; 1/2	Yes: 1	Yes; ½	Yes; 2 pt	Yes; 1
Ped. Neuro-radiology	Yes; 4	Yes: 1	Yes ;2 1/2	Yes; 5 pt	
Ped Neurosurgery	Yes; 5	Yes: 1	Yes; 1 ½	Yes; 3 pt	
Neuropathology					
Clinical Genetics					
Metabolic disease				Yes; 1	
Child psychiatry	Yes; 8			Yes; 3	
Rehabilitation	Yes; 3		Yes 1	Yes ; 1	
Outpatient clinics					
New patients/year	1600	938	2200	1500	927
Control visits/year	6900	2362	6500	5000	2500
Dev Center Early Intervention			3500	2600	
Inpatients					
Hospital admissions/year	680		350-400	300-350	200
Day Care/ year	3		800	5	
Consultations other wards			170	350	
Education					
SENEP accredited center	Fully	Partial	Fully	Fully	Partial
lecturer	1	No	1	3	
Master program 2years	No	NO	No		
PHD program, 2 years	No	No	No		
Fellows (2y)	5		no	2	
Paediatric residents (3 months)	20/year		6/year	6/year	
Neurology residents			-	-	
Neurophysiology residents			-	-	

HNJM: Hospital Nino Jesus Madrid, HUFA: Hospital Universitario Fundacion Alcoron, HVNG: Hospital Virgen de las Nieves Granada, HRSC: Hospital Reina Sofia Cordoba, HVS: Hospital Virgen de la Salud.pt: part time, ext: external source

Region:East coast and Balearic Islands	Catalonia Autonomous Community	Catalonia Autonomous Community	Catalonia Autonomous Community	Balearic Islands Autonomous Community	Valencia Autonomous Community
City	Barcelona	Barcelona	Sabadell	Palma de Mallorca	Alicante/Valencia
Hospital	SJdD	VHUH	UHS	HSL	HUSJ
Inhabitants	7,565,603 (16%)	7,565,603 (16%)	1.500.000/7,565,603	250.000/1.113.114 hab. (2,3%)	235000/5.117.190 hab.(11.1%)
Children	Tertiary Referral	Tertiary Referral	91.000		
Staff	11	6		2	4
Paediatric Neurologists (SENEP)	11	6 (2)	7(4)	2 (2)	2 (1)
General Paediatricians	?	?			19
Specialized nurse (neuro) psychologist	6	3			
	2		2	2	
Beds total			90		39
Earmarked PN beds	15	yes	no	yes	no
Associated departments					
Neurophysiology	Yes	Yes	Adult neurologists	Yes	yes
Neuroradiology	Yes	Yes	Yes	Yes	Yes
Neurosurgery	Yes	Yes	Yes	Yes	no
Neuropathology	Yes	Yes		Yes	Yes
Clinical Genetics	Yes	Yes	Yes	Yes	
Metabolic disease	Yes	Yes	Yes	Yes	Yes
Child psychiatry	Yes	Yes	Yes	yes	yes
Rehabilitation	Yes	Yes		Yes	Yes
Outpatient clinics	Yes				
New patients/year	3355	1500	530	1500	320
Control visits/year	8100	4000	1300	6500	1850
Inpatients					
Hospital admissions/year	421	250-300		60-120	270
Day Care/ year		200			80
Consultations other wards		650	4742	250	50
Education					
SENEP accredited center	Full	Full	Partial	Partial	Partial
Lecturer	1	1		1	1
Master program 2years	Yes	Yes	No	No	No
PHD program, 2 years	Yes	Yes	No	No	NO
Fellows (2y)	7/y				
Paediatric residents (3 months)	28	Yes	4	2	2
Neurology residents		Yes	1		1
Neurophysiology residents		yes			

VHUH; Val d'Hebron University College, HSL: Hospital Son Llatzer; SJdD: Hospital Universitario San Juan de Deu, UHS: Universidad Hospital Sabadell, HUSJ: Hospital Universitario San Juan de Alicante/. Tertiary Referral: They receive patients even from abroad.

Region: Northern part	Aragon/la Rioja/Soria Autonomous Community	Asturias Autonomous Community	Navarra Autonomous Community	Navarra Autonomous Community
City	Zaragoza	Oviedo	Pamplona	Pamplona
Hospital	HUMS	HUCA	CHN	CUN
Inhabitants		1 million	650.000	
Children	23.000	108.000	100.000	100.000
Staff		2	3	2
Paediatric Neurologists (SENEP accredited)	2.5 (1)	1(1)	3(2)	2(1)
General Paediatricians		1		
Specialized nurse		1		1
(neuro)psychologist			1, partial time	1
Paediatric Beds total		54	45	
Ear marked PN beds	none	1 a 2		
Associated departments				
Neurophysiology	Yes	Yes	Yes	Yes
Neuroradiology	Yes	Yes	Yes	Yes
Neurosurgery	Yes	Yes	Yes	Yes
Neuropathology	Yes		Yes	Yes
Clinical Genetics	Yes		Yes	yes
Metabolic disease	yes		Yes	Yes
Child psychiatry			Yes	Yes
Rehabilitation			yes	yes
Outpatient clinics				
New patients/year		550-600	1500	
Control visits/year		1600-2000	5600	
Inpatients				
Hospital admissions/year		300		
Day Care/ year				
Consultations other wards				
Education				
SENEP accredited center	fully	partial	partial	fully
Master program 2years				
PHD program, 2 years				
Fellows (2y)	1/year	1/year		
Paediatric residents (2-3 months)	10	Yes (3)	16 (1/3months)	8
Neurology residents	3-4	Yes		
Neurophysiology residents	4	yes	2 (1/3 months)	

HUMS: Hospital Universitario Miguel Servet, HUCA: Hospital Universitario Central de Asturias, CHN: Complejo Hospitalario de Navarra, CUN: Clinica Universidad de Navarra