

**European Paediatric Neurology Training Advisory Board**  
**Report nr 10:**  
**EVALUATION OF THE PAEDIATRIC NEUROLOGY**  
**TRAINING IN FINLAND**  
**2011**

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## ***Summary of conclusions***

- The Paediatric Neurology in Finland has a very high clinical, social and scientific level.
- The contents of paediatric neurology training including side modules are appropriate.
- Training facilities and courses are available to all PN in Finland.
- Research activity and facilities are appropriate.
- There is a continuous need for new recruitments of trainees in paediatric neurology.
- Nine months of general practice should not count towards paediatric neurology training.
- The length of training significantly deviates from the European recommendation.
- Neonatology including neonatal neurology should be included in the training.
- Clinical tutoring is satisfactory. Long-term educational supervision could be improved.

## ***Introduction:***

Child Neurology was accepted on the European level as a subspecialty of Paediatrics as well as of Neurology in 2002. A European syllabus and training programme 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 well as by the relevant chapters of the Union of European Medical Specialists (UEMS).

The European Training Advisory Board for Paediatric Neurology is active as a joint effort of the relevant groups in Europe and is comprised of four delegates from the CNA, four from the EPNS Education and Training Committee, the president and secretary of the EPNS, one representative of the European Academy of Childhood Disability and one of the UEMS Neurology board. The chairperson of the CNA chairs the Board.

The Training Advisory Board 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 will have a quality of training that is in accordance with the European training programme. The Finnish paediatric neurologists through their representation in the Committee of National Advisors requested an evaluation by the TAB of the child neurology training in Finland in accordance with this aim.

## ***Demographic Data:***

The **Republic of Finland**, member state of the EU, is a Nordic country situated in the Fennoscandian region of Northern Europe. The islands of Åland have a partial independence and are not members of the EU.

The Finnish population is 5,4 million, with the majority concentrated in the southern region. It is the eighth largest country in Europe in terms of area and the most sparsely populated country in the European Union. 16.6% of the inhabitants are between 0-14 years (male 459,950; female 441,220). The infant mortality rate is 3.4/1000 live births. The life expectancy is 82 years for women and 75 years for men.

Finland is a parliamentary republic with a central government in Helsinki. The fundamental administrative divisions of the country are the 336 locally governed municipalities, which account for one half of the public spending.

A total of about one million residents live in the Greater Helsinki area (which includes Helsinki, Espoo, Kauniainen and Vantaa), and a third of the country's gross domestic product is produced there. Other larger cities include Tampere, Turku, Oulu, Jyväskylä, Lahti and Kuopio.

### **Municipalities of Finland (2009).**

<b>City</b>	<b>Population</b>	<b>Land area</b>	<b>Density</b>
<b>Helsinki</b>	<b>588,941</b>	213.75	2,755.28
<b>Espoo</b>	<b>248,355</b>	312.26	795.35
<b>Tampere</b>	<b>213,344</b>	525.03	406.35
<b>Vantaa</b>	<b>200,410</b>	238.37	840.75
<b>Turku</b>	<b>177,430</b>	245.67	722.23
<b>Oulu</b>	<b>141,742</b>	1,410.17	100.51
<b>Jyväskylä</b>	<b>130,974</b>	1,170.99	111.85
<b>Lahti</b>	<b>101,686</b>	135.05	752.95
<b>Kuopio</b>	<b>96,830</b>	1,597.39	60.62
<b>Kouvola</b>	<b>88,066</b>	2,558.24	34.42
<b>Pori</b>	<b>83,042</b>	834.06	99.56
<b>Joensuu</b>	<b>73,373</b>	2,381.76	30.81
<b>Lappeenranta</b>	<b>72,038</b>	1,433.36	50.26
<b>Hämeenlinna</b>	<b>66,854</b>	1,785.76	37.44
<b>Rovaniemi</b>	<b>60,112</b>	7,581.97	7.93

### ***Health and Medical Care***

The Finnish health care system is a public based system founded in about 18.9% directly by households and 76.6% by taxation. Some private practice is also available in the country, but rarely as an only job of the medical professionals. The health care system covers 100% of the population.

The local authorities are responsible for organizing specialized medical care for residents of the municipality. To this end, the country is divided into 20 hospital

districts; in addition, Åland forms its own hospital district. The largest hospital district in terms of population base has over 1.4 million inhabitants, while the smallest has over 65,000. These figures represented a total of 7.2 hospital beds per 1000 people. On average there are 307 residents for each doctor.

### ***Structure of the Visit***

The Helsinki area was visited 12 to 14 October 2011 by Lars Palm, Paul Casaer and Francisco Carratalá. Pre-visit information had been made available to the visitors' team beforehand by mail questionnaires. The host of the visit was Professor Heikki Rantala representing the Finish Paediatric Neurology Society. The host for the Children's Castle and the Helsinki University Central Hospital visit was Professor Helena Pihko.

#### ***Centres visited:***

Helsinki University Central Hospital: Pediatric Neurology wards and the Emergency and Intensive Care facilities.

Jorvi Hospital: Medical facilities related to Paediatric Neurology assistance. The visit was hosted by Dr Hannu Heiskala.

#### ***Activities performed:***

12/10/2011: Afternoon meeting with the representative of the Ministry of Education and Culture Ms Johanna Moisio, Senior Advisor, together with professors Heikki Rantala (Oulu), Helena Pihko (Helsinki), Kai Erikson (Tampere), Leena Haataja (Turku) and drs Kai Eriksson (Tampere), Pekka Nokelainen (Kuopio), Hannu Heiskala (Jorvi).

13/10/2011: Hospital visits. Interviews of trainees. Visitors team work meeting.

14/10/2011: Preliminary report from the visiting team to the Finnish group.

### ***Paediatric Neurology in Finland***

Paediatric Neurology in Finland is an independent, hospital based speciality since 1978. It makes Finland one out of six countries in Europe in which Paediatric Neurology is an independent speciality. There are 19 Paediatric Neurology

Departments around the country, integrated in paediatric hospitals or clinics or organised as independent units in community hospitals. Neurodisability and mental retardation are under the responsibility of the paediatric neurology departments. There is a total of 82 paediatric neurologists (PN) in the country with a population of 901170 under 15 years of age which gives a ratio of 10990 potential patients for every paediatric neurologist.

The referral tertiary centres are: the University Hospital of Helsinki with 17 Paediatric Neurologists and 5 Residents, Turku, Tampere and Oulu with 4 PN and 2 Residents each; and finally Kuopio with 3 PN and 2 Residents. There are 32 PN and 13 Residents in Paediatric Neurology Departments in University Hospitals in Finland.

There are 22 PN in Central Hospital in Finland: Kotka 2, Lappeenranta 2, Lahti 3, Hämeenlinna 1, Pori 2, Mikkeli 1, Jyväskylä 3, Seinäjoki 2, Joensuu 3, Vaasa 2 and Rovaniemi 1. In the District Hospital of Hyvinkää there are two PN working.

The total number of PN in out-patients Services are 10. Turku 3 and Nivala, Vaasa, Seinäjoki, Tampere Helsinki Espoo and Vantaa with 1 each. There are 3 PN in full time private practice in Finland (Helsinki, Oulu and Turku).

In Institutes for Mentally Retarded there are 9 paediatric neurologists: Helsinki 5 (one for Swedish speaking children), and Tampere, Joensuu, Kuopio and Oulu 1. There are 3 PN in Neurodisability Centres and in the Helsinki area 1 for Swedish Speaking children.

The positions for paediatric neurology are regulated by the National Supervisory Authority for Welfare and Health (Valvira) under the control of the Ministry of Education and Culture, which guarantees and authorises the use of the occupational titles of healthcare professionals.

The relationship between Central Hospitals and University Hospitals PN centres, apart from fluent phone and e-mail communications, is maintained through

periodic meetings every two weeks, with days free from duty to attend those sessions. Research activity is actively encouraged in all PN centres, not only in the University ones.

### ***Paediatric Neurology Training in Finland***

The specialist training in Finland is given by the universities and paediatric neurology is a university degree, which is not a frequent situation in Europe. A young doctor who has achieved the **Licentiate of Medicine** (Licensed Doctor by Valvira) may apply to any of the paediatric neurology departments available in University Hospitals for PN training. Trainees are selected according to the availability of training positions and have to pass a personal interview after which they are evaluated during a few months test period. After a 5-year training period trainees can obtain the **Specialist degree in medicine** (Licensed Specialist by Valvira). The trainees have to pass a compulsory state evaluation.

The complete PN training period in Finland is about 5 years. It follows a Finnish training programme, not entirely equal to the European Training Syllabus. At the time of the visit the structure was as follows:

<i>TRAINING PERIOD</i>	<b>LENGTH OF TRAINING</b>
General Practice in Health Centres	9 months
Paediatrics	1 year
Adult Neurology	3 months
Paediatric Neurology	2.5 to 3 years
<i>Optional six months: Adult neurology, other neurosciences, child psychiatry, genetics, institutes of mental retardation, and research.</i>	
<b>Total</b>	5 years

The first 9 months as in general practice are obligatory under the directions of the National Health Authority. These periods of training are not necessarily being done in the same hospital as the specialist training and can be interrupted several times for justified reasons.

All the training period in PN constitutes a paid employment. It is not usual to complete special training abroad. During the whole training period, the trainees are supervised by an individual tutor that is assigned on a voluntary base.

Newly graduated paediatric neurologists easily find employment, especially outside the Helsinki area, where more PN positions seems to be available.

The total number of trainees in Finland at the time of the TAB visit were 13, most of them concentrated in Helsinki with 5, and all the other University Hospitals with two. There are 1 to 3 new residents starting training in PN per year.

### ***Conclusions and comments***

The following conclusions have been drawn by the TAB as a result of the visit:

- The Paediatric Neurology in Finland has a very high clinical, social and scientific level.
- The contents of paediatric neurology training including side modules are appropriate.
- Training facilities and courses are available to all PN in Finland.
- Research activity and facilities are appropriate.
- There is a continuous need for new recruitments of PN trainees.
- The total length of training is five years, however this period includes nine months of general practice. Thus 4 years 3 months are left for the whole NP training. This deviates significantly from the European recommendation of 6 years, including 3 years of paediatrics whereof 1 year can be PN.
- 6 months of Neonatology with neonatal neurology should be included in the specialty training.
- Clinical tutoring is satisfactory but long-term educational supervision could be improved.

### **Recommendations and comments**

- The obligatory 9 months of general practice are of evident value for medical training but should not be counted towards PN training. In reality they constitute an internship period.



- Recent feedback by Professor Rantala during the preparation of this report informs us that Finish Health and University authorities extend the whole training period by another year. Even after this change, however, the comment about the general practice is still valid.
- The same feedback also informs that the amount of neonatology has been increased recently by direction of the Finnish Government which brings paediatric neurology training in Finland very close to meeting the European standards.
- The importance of continuing to recruit trainees to paediatric neurology should be emphasised.
- We suggest that long-term educational supervision with the aim to support the professional development is discussed within the Finnish group of colleagues and trainees.

### ***Follow-up***

The Finnish Paediatric Neurology Society already gave feedback to the Training Advisory Board during the exceedingly long preparation time of this report.

Further feed-back from the Finnish group will be highly valued. Topics that would be covered are:

- Continued development of training in Finland
- Any change of training structure taking place including length and content of training
- Any change as to the first 9 months that at present count towards paediatric neurology training.

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