

# **European Paediatric Neurology Training Advisory Board**

**Report nr 9:**

**EVALUATION OF THE PAEDIATRIC NEUROLOGY TRAINING IN  
THE REPUBLIC OF GEORGIA**

**2011**

**Authors Lars Palm and Coriene Catsman-Berrevoets**

**Approved by the Training Advisory Board, December 16<sup>th</sup> 2011**

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**EPNS Education and Training Committee delegates**

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## ***Summary of recommendations:***

**Advice 1:** The number of medical schools in Georgia should be further reduced to 2 or 3 major ones with a close collaboration with university hospitals. This would reduce the cost of basic medical training, reduce the expensive overproduction of doctors and could produce licensed young doctors with a better clinical and professional background.

**Advice 2:** Create a 1 or 1 ½ year period of internships after medical exam in which students rotate between the major specialisms and are shaped as doctors, as is done in most countries in western Europe and USA.

**Advice 3:** Provide medical students after successful internships, which may include oral examinations with a license to work as basic medical doctor.

**Advice 4:** Shape the training of paediatric neurologists according to the European syllabus and extend the training period to 5 years, incorporating all the relevant fields.

**Advice 5:** Start the paediatric neurology training after obtaining the basic practical medical knowledge and the basic medical certification

**Advice 6:** During the training as paediatric neurologist, trainees should be able to function as fully licensed medical doctors under supervision of senior paediatric neurologists

**Advice 7:** Residents in paediatric neurology should receive a salary. When they are licensed as a basic medical doctor and they can see paediatric neurology patients under supervision, they can earn back their salary for department or hospital.

**Advice 8:** In order to make the PhD degree comparable and as much worth as those in Western countries, the work should result at least in 3-4 publications in peer reviewed journals.

**Advice 9:** The Georgian Paediatric Neurology Association could facilitate an attractive post-license program in cooperation with the universities. A proper reward or, less attractively a punishment system, should be developed in order to motivate licensed colleagues to participate seriously.

**Advice 10:** The quality of neurophysiological investigations and their assessment could be ameliorated by concentrating this type of investigations in one department under the care of a dedicated paediatric neurologists/neurophysiologists.

**Advice 11:** It is of utmost importance to spread the theoretical and practical message of the multidisciplinary approach practiced in the Tbilisi neuropaediatric rehabilitation center throughout the country and support the persons who are bringing the message.

**Advice 12:** The state program for children who need paediatric neurological consultation or treatment or rehabilitation treatment should be extended beyond the age group of 0-3 years and beyond the CP diagnosis group. All children up to 18 years should be included in this program.

### ***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 program 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 EPNS and the CNA as a means to implement the program in the training of Child Neurology specialists in the European countries. 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 program. The Training Advisory Board offers to national child neurology societies the opportunity to work together with them to evaluate the national training system. The Training Advisory Board includes four delegates from the CNA, four from the EPNS' Education and Training Committee and the president and secretary of the EPNS. The chairperson of the CNA chairs the Board.

The Georgian paediatric neurologists through their representation in the Committee of National Advisors initiated to have the Georgian training evaluated in accordance with this aim. The visit took place September 7-10<sup>th</sup>, 2011 in Tbilisi. The visit needs to be followed in about a year by a report from the Georgian group.

### ***Demographics and medical care***

The republic of Georgia is a country in the southern Caucasus and situated at the dividing line of Asia and Europe with approximately 4 469,200 inhabitants. The estimated number of children under 18 years of age is 921,000, those under the age of 5 years are estimated at 234,200. Birth rate 14.4 births/1,000 population, total fertility rate 1.42 children born/woman, infant mortality rate 17.97 deaths/1,000 live births, life expectancy at birth total population as estimated in 2011: 76.09 years (male: 72.8 years, female: 79.87 years (CIA World Fact Book demographic statistics).

The country has a strong agricultural tradition. The largest city and capital city is Tbilisi with 1.24 million inhabitants. Smaller cities are Kutaisi with 202,443 inhabitants and Batumi with 121,806 inhabitants, Rustavi 121,806 inhabitants, Zugdidi 95,131 inhabitants, Poti 52,000 inhabitants, Gori 48,929 inhabitants, Sukhumi 40,128 inhabitants, Senaki 32,284 inhabitants, Samtredia 31,452 inhabitants



A state program for free medical care exists but is limited to certain groups and diagnoses. One such group are the 'officially poor'. Despite very strict criteria, approximately 35 % of Georgians are medically cared for in this program. Also, this state program provides for medical care for children up to the age of 3 years. In respect to neurological diagnoses, medical free care is provided for children with Congenital Cerebral Paresis but not for children with acquired brain injury. The status of CP is given by a board, officially not before the age of three. In reality, the board accepts medical certificates stating the functional diagnosis at an earlier age. There is no general public insurance system. A private insurance system was set up 2 years ago. This insurance system, in which approximately 10 % of Georgians are able to participate does not pay for costs of chronic illnesses. For analysis and treatment of the paediatric neurological diseases which are not covered by the state program or private insurance, parents need to seek private funding. Possibilities to analyse paediatric neurological illnesses are limited. To obtain a good quality MRI is possible as well as limited karyotyping. In contrast, laboratories in which metabolic and more complex genetic screening methods are carried out are not yet present in Georgia. Material on which more complex assessments have to be done need to be sent abroad at high costs for parents. The same holds through for availability of medication.

## ***Evaluation visit***

### ***Account of meetings, site visits in which information was acquired***

During our visit, we were the guests of prof Nana Tatishvili , president and Ivane Bokeria vice president of the Georgian Society of Paediatric Neurology. They provided us with pre-visit data sheets and also helped us as interpreters if necessary.

#### **Visits:**

Iashvili Central Children Hospital, department of Paediatric Neurology, head prof. Nana Tatishvili

Center of Child Neurology and Neurorehabilitation, head dr. Zaza Kakushadze

Bakur Kotetishvili Psyconeurological Clinic, head dr. Bakur Kotetishvili

Children's New Clinic, head dr.D.Pruidze

#### **Meetings:**

Dr Mikheil Dolidze, deputy Minister of Ministry of Labor, Health and Social Affairs

Mrs Eka Paatashvili, Head of Regulation Division Health Care Department, Ministry of Labor, Health and Social Affairs

Prof. Ivane Chkhaidze, deputy director of Iashvili Central Children Hospital

Prof Zaza Bokhua, Director of post graduate medical education and CME., Tbilisi State Medical University

Prof Nana Geladze, Chair of Paediatric Neurology Tbilisi State Medical University

Prof Gia Lozhanidze, Chairman of Directors board of the Georgian Medical Association

Dr Othar Toidze, Chairman of the Committee of Health and Social Issues, Parliament of Georgia

### ***Paediatric Neurology in Georgia***

Paediatric Neurology in the Republic of Georgia is recognised as an independent specialty. Until 2009, Paediatric Neurology was a subspeciality of Neurology. When it became an independent speciality, a new curriculum was started. The Georgian Society of Paediatric Neurology was founded in 2000. From 2003 till 2008, a curriculum based on European length was working. Then duration of training was reduced to 3 years, by the government. The official number of paediatric neurologists is 90 of which 10% are originally neurologists and 90% paediatricians. In addition, there are nearly 250 neurologists educated in paediatric neurology by way of the former system which was in use before 2009, with permission to work as paediatric neurologists.

In Tblisi, there are three neuropaediatric centers. The department of paediatric neurology of the Iashvili Center Children Hospital functions independently and includes paediatric psychiatry. The second one is the Center of Child Neurology and Neurorehabilitation and functions as a paediatric neurorehabilitation center. The third one is integrated in a paediatric department in the Children's New Clinic. In the cities of Kutaisi and in Batoemi paediatric neurologists are embedded in the department of Paediatrics of the local hospitals. The majority of paediatric neurologists, as well as the neurologists with a paediatric neurology licence are employed in an out-patient services (97%). Paediatric neurologic centers employ 1% of paediatric neurologists. Few are embedded in a paediatric department (0.5%) or a neurodisability center (1%) or other units (0.5%). In order to understand the structure of the training of paediatric neurologists in Georgia, a short summary of the school system and medical education in general is given below.

### ***School system in Georgia***

The school system is divided into elementary (6 years; age level 6–12), basic (3 years; age level 12–15), and secondary (3 years; age level 15–18), or alternatively vocational studies (2 years). Students with a secondary school certificate have access to higher education. Only the students who have passed the Unified National Examinations may enroll in a state-accredited higher education institution, based on ranking of scores he/she received at the exams. Most of these institutions offer three level studies: a Bachelor's Program (3–4 years); a Master's Program (2 years), and a Doctoral Program (3 years). There is also a Certified Specialist's Program that represents a single-level higher education program lasting for 3–6 years.

### ***Paediatric Neurology Training***

A degree of one of the Medical Universities of Georgia is required to apply to a post in the Paediatric Neurology training program. Very recently, the number of Medical Schools accredited by the Ministry of Education and Science of Georgia was reduced from 80 to 18 in order to ameliorate the quality of medical education. Education at the medical schools is to a large extent theoretical and the schools are not connected to hospitals and do not provide for internships. Also medical school teaching staff largely are not active within medical research.

There is no limitation in number of students to enter Medical Schools and this has led to a serious overproduction of graduated medical students. Newly graduated medical students thus have a low level of clinical experience and are not licensed to practice without supervision. 80 % of medical students apply for a specialization in any of the approximately 80 specialties registered.

After application, the selection for specialist training is made through a board examination organized by the Ministry of Health. The Ministry of Health also decides on the need of training capacity and the number of residents needed for a certain specialty. Residents arrive at their chosen specialty training post with almost no idea how to be a medical doctor. The first part of the specialty training is spent shaping the students into the profession. During the length of their specialization, residents do not receive a salary and depend on family or

other sources to complete their specialization. Only now, some institutions are starting to pay the residents. The goal will be that in the future all residents will have paid positions.

At present, only the three paediatric neurological centers accept residents for training. No accreditation system for the accreditation of training centers exists. Nowadays, 10 residents are in training to become paediatric neurologists. Every year, two to three residents start training. Medical associations are involved in shaping and writing the residency programs. Training in Paediatric Neurology is organized following modules of a National Training Program, which is described in the syllabus of the Georgian Society of Paediatric Neurology. To develop guidelines, the GSPN received a grant from the Ministry of Health.

Duration of the Paediatric Neurology training is three years, including 1 year of Paediatrics. The length of the Paediatric Neurology specialty training was recently reduced from 4 to 3 years, by order of the Ministry of Health. Neurodisability training of 5 months is part of the training. However, analysis and care for children with mental retardation is the speciality of paediatric psychiatry. Training in neuroradiology is possible on a voluntary basis. Training in clinical neurophysiology or neuropathology is not part of the program. Attention is paid to ethical issues, multidisciplinary care and management and organisational issues. Residents are de facto not functioning as medical doctors and mainly have an observant role. They function in a strict tutorial system. At the end of the residency, the Ministry of Health takes a final examination after which the resident may practice as a medical doctor and Paediatric Neurologist independently and without supervision. The content of the examination is the responsibility of the professional organizations, i.e. the Georgian Society of Paediatric Neurology. After finishing training, it is quite hard to obtain a job as a paediatric neurologist and traditionally they have a very low basic salary. Clinicians at least have to raise  $\frac{3}{4}$  of their salary from outpatient consultations, in order to raise their income to a decent level. This leaves little time for unpaid activities such as research.

**Modules of neurological training described in the syllabus of the Georgian Society of Paediatric Neurology \***

1. Paediatrics: 12 months
2. Adult Neurology 2 months
3. Neurological Examination of a child – 1 month
4. Headache – 1 months;
5. Intracranial Hypertension, Coma and Brain Death – 1 month
6. Epilepsy, non-epileptic paroxysms, and Sleep Disorders – 2 months
7. Neuroinfections – 1 month
8. Neurooncology, Malformations and Cerebrovascular disorders – 1 month
9. Ataxia and Movement Disorders – 1 month
10. Genetic and Metabolic Disorders – 1 month
11. Traumatic and Anoxic Disorders of Brain and Spinal Cord – 1 month
12. Neurodevelopmental Disorders – 1 month
13. Neurobehavioral Disorders – 1 months
14. Neuromuscular Disorders – 1 month
15. Autonomic Nervous System Disorders, Neuroendocrinology and Neurological Manifestations of Systemic Diseases – 1 month
16. Neonatal Neurology – 1 month
17. Neurorehabilitation – 5 months
18. Child and adolescent Psychiatry ( ½ day a week during 6 months)

**Training modules which are available but not obligatory:**

19. Neuroimaging- 1 month
20. Advanced paediatric epileptology - 4 months

\*Modules are integrated in the clinical daily work routine.

### ***Postgraduate training and research***

At present, no system of post-training evaluation exists and the professional level of knowledge of individual paediatric neurologists fades away quickly. Paediatric neurologists working in outpatient facilities throughout the country are in general not very interested to have additional education. Many of them still also have not a very modern concept of paediatric neurology, being trained in the Soviet days. In order to make modern ideas on Paediatric Neurology more available to non English speaking (older) colleagues and to become less dependent of Russian books and literature, prof. Tatishvilli and her colleagues of the board of the Georgian Society of Paediatric Neurology wrote a Paediatric Neurology textbook in Georgian (published 2011). The problem of post-training teaching is also on the agenda of the chair of the director's board of Georgian Medical Association (4000 members from more than 70 professional associations representing 60% of doctors). He stated that one of the main goals of his organization is to start organizing continuous professional education, in order to maintain post examination quality of the profession. Also the chair of parliament committee and social issues felt that continuous education should have priority and is doing his best to put these issues forward. The problem to get these issues started is mainly to raise the finances and the negative attitude of many of those who have been trained in the Soviet period.

In clinical medicine, obtaining a PhD grade is possible and is needed for an academic career. In contrast to the residency program, which is under the direction of the Ministry of Health, the PhD program is under the direction of the Ministry of Education. Largest part of the PhD training consists of a 3 years theoretical training course, which is evaluated by an examination. Research projects are proposed by senior researchers and have to be approved by the Ministry of Education. Students have to do exams in a competition to win the project. The student carries out the research under strict supervision. There are no grants or other financial opportunities from which research can be financed and PhD students are not being paid. Some students manage to enroll in a project in which Georgian scientists cooperate with centers in the USA or Europe and benefit from grants generated through these channels. A main breakthrough is that the students now know English, and can find the appropriate literature. However, the virtual absence of well established research departments in almost all fields makes it almost impossible to publish in the international literature. Becoming a full time researcher is in general unattractive because of the difficulty to raise money for a living and for this reason medical graduates prefer a clinical career. Many students therefore spend their PhD studies abroad. They do not all return to Georgia, which causes a problem for the education of a next generation.

### ***Evaluation visit - impressions***

Georgia is a country in transition from a poor economic situation to European level. The Georgian Paediatric Neurological Association is making a strong effort to make a transition from the former Soviet type of organization and education to a more modern European standard. On this road of transition, many obstacles still have to be removed. At present, the paediatric neurology practice still suffers from an old fashioned education system from soviet times. The majority of paediatric neurologists and the neurologist licensed to practice paediatric neurology practice in outpatient facilities and have no access to, or knowledge of modern

paediatric neurology or are not really interested to acquire that knowledge. In a handful of larger centers, paediatric neurologists work in a more contemporary fashion. However, they also suffer severely from the absence of laboratories that offer up to date genetic, metabolic and biochemical screening. Radiologic facilities are well developed and the larger centers have access to MRI. However, expert paediatric neuroradiologists are still badly needed. Sending material abroad for analysis is costly and time consuming. Moreover, the social security system is still severely underdeveloped and only for this reason many parents cannot afford basic paediatric neurological consultation, evaluation and treatment for their children. Dedication and clinical skills of paediatric neurologists working in the few larger centers are highly developed but their therapeutic possibilities are very limited because of the unavailability or costs (and not covered by state reimbursement of many common drugs used for treatment of paediatric neurological diseases in Georgia. As examples intravenous gamma globulin for treatment of Guillain Barré syndrome and many third generation anti-epileptic drugs were mentioned. The presence of one paediatric neurodisability center in Georgia, which treats children in a multidisciplinary way on an international level, is a good start and a noble initiative, but is obviously unable to meet the nationwide need for such facilities. In some outpatient clinics smaller units offering part of this service are being created. The limitations to certain diagnoses in respect to refunds of costs of treatment in the State programs of children in a paediatric neurodisability center and insurance is the cause that many chronically disabled children cannot benefit of this type of treatment.

The training of paediatric neurologists is hampered by the purely theoretical education in Medical Universities and without any clinical experience. The Paediatric Neurology Training is shaped as a three year internship rather than a training of a medical specialist with its own responsibilities. They de facto are not licensed to work as independent medical doctors until they graduate as Paediatric Neurologists. This also causes the problem that Paediatric Neurologists in training are not able to earn a living from outpatient consultations as the registered Paediatric Neurologists do, which keeps them depending on their families.

In respect to the content and duration of the education, the Georgian Paediatric Neurology Training does not meet as yet the criteria of the European syllabus. The duration of paediatric and adult neurology training is not in accordance with the European syllabus. Paediatric Neurology trainees however are exposed to interdisciplinary team work in the Tbilisi Paediatric Rehabilitation Center. In respect to neurophysiological facilities, the use and interpretation of EEG is well integrated in the daily clinical work but EMG and evoked potentials are investigations which are not easily obtained. No independent Neurophysiological unit with dedicated Clinical Neurophysiologists exists in Georgia.

Children with mental retardation are not being cared for by paediatric neurologists but rather by paediatric psychiatrists. At present a paediatric neurologist is being trained as a paediatric psychiatrist in order to bridge this gap in the care for these children.

Recently, the Georgian Ministry of Health reduced the length of Paediatric neurology training from 4 to 3 years. Even if the length of training was adapted to that of the European syllabus, the present situation of training without proper medical license and without payment would be unacceptable. The circumstances to

do research or develop a scientific career for paediatric neurologists in training are very difficult and hampered by the poor scientific tradition and the absence of a grant system.

### ***Conclusions and recommendations***

Major conclusions:

1. Until now, students who obtain their final medical exam at a Medical University have no clinical experience or contacts whatsoever. The education is purely theoretical. They arrive at their chosen specialization with almost no idea how to be a medical doctor and the first part of the training is spent by shaping the students to the profession.

Advice 1: The number of medical schools should be further reduced to 2 or 3 major ones with a close collaboration with university hospitals. This would reduce the cost of basic medical training, reduce the expensive overproduction of doctors and could produce licensed young doctors with a better clinical and professional background.

Advice 2: Create a 1 or 1 ½ year period of internships after medical exam in which students rotate between the major specialisms and are shaped as doctors as is done in most countries in western Europe and USA.

Advice 3: Provide medical students after successful internships, which may include oral examinations with a license to work as basic medical doctor.

2. At this moment the education of paediatric neurologist is far too short (3 years) in comparison to the European syllabus. In addition, residents are not de facto functioning actively as medical doctors and mainly observe instead as act as a medical doctor.

Advice 4: Shape the training of paediatric neurologist according to the European syllabus and extend the training period to 5 years, incorporating all the relevant fields.

Advice 5: Start the training after obtaining the basic practical medical knowledge and the basic medical certification

Advice 6: During the training as paediatric neurologist, trainees should be able to function as fully licensed medical doctors under supervision of senior paediatric neurologists

Advice 7: Residents in paediatric neurology should receive a salary. When they are licensed as a basic medical doctor and they can see paediatric neurology patients under supervision, they can earn back their salary for department or hospital.

3. The PhD education should not be exclusively theoretical but should contain an opportunity to do sound research under supervision.

Advice 8: In order to make the PhD degree comparable and as much worth as those in Western countries, the work should result at least in 3-4 publications in peer reviewed journals.

4. At this moment no successful system for continuous education is available. This is dangerous because many paediatric neurologist work under solitary circumstances with very little feedback and opportunities to keep up with new developments. The feeling is that licensed colleagues are either not interested or intellectually not capable of following the offered schooling.

Advice 9: The Georgian Paediatric Neurology Association could facilitate an attractive post-license program in cooperation with the universities. A proper reward or, less attractively a punishment system, should be developed in order to motivate licensed colleagues to participate seriously.

5. EEG and other neurophysiological investigations are now carried out very much within the clinical routine by many doctors with scant knowledge. The quality of the assessments and interpretations is not optimal.

Advice 10: The quality of neurophysiological investigations and their assessment could be ameliorated by concentrating this type of investigations in one department under the care of a dedicated paediatric neurologists/neurophysiologists.

6. The foundation of a multidisciplinary working paediatric rehabilitation center under the expert guidance of paediatric neurologists is seen as a very positive development which should be supported by all means. The lack of more such centers indicates that many children with neurological impairments do not receive proper training, education and social support

Advice 11: It is of utmost importance to spread the theoretical and practical message of this multidisciplinary approach throughout the country and support the persons who are bringing the message.

Advice 12: The state program for children who need paediatric neurological consultation or treatment or rehabilitation treatment should be extended beyond the age group of 0-3 years and beyond the CP diagnosis group. All children up to 18 years should be included in this program.

### ***Feedback***

A feedback-report to the Training Advisory Board about one year after this visit is agreed upon with the Georgian Paediatric Neurology Association. Subjects suggested to be brought up in the feedback are:

- Development of the political process on basic medical training and initiation of specialization, including discussions on a rotation system.
- Development of the position of the trainee-doctors during their training and their development into independent specialists.
- Further expansion of services for children with neurological impairments.
- Development of a post-license training program.
- The employment and financial situation for training doctors and (young) paediatric neurologists.
- The total length of child neurology training – further development and discussions.

Lund and Rotterdam December 16<sup>th</sup>, 2011

Lars Palm

Coriene Catsman-Berrevoets