



Introduction to “Diversity of Child Health Care in Europe: A Study of the European Paediatric Association/Union of National European Paediatric Societies and Associations”

Jochen Ehrich, MD, DCMT^{1,2}, Leyla Namazova-Baranova, MD^{2,3}, and Massimo Pettoello-Mantovani, MD^{2,4}

The field of pediatrics in Europe is characterized by the diversities, variations, and heterogeneities of child health care services provided in 53 European countries with more than 200 million children below 18 years of age. Managing the health care of infants, children, and adolescents in Europe requires balancing clinical aims, research findings, and socioeconomic goals within a typical environment characterized by cultural and economic complexity and large disparity in availability, affordability, and accessibility of pediatric care. Since its foundation in 1976, the European Paediatric Association-Union of National European Paediatric Societies and Associations has worked to improve both medical care of all children and cooperation of their caretakers in Europe. Such a report has been conceived in the strong belief that broadening of the intellectual basis of the European Paediatric Association-Union of National European Paediatric Societies and Associations and creating a multidisciplinary society will be necessary to reduce fragmentation of pediatrics and tackle the legal, economic, and organizational challenges of child health care in Europe. (*J Pediatr* 2016;177S:S1-10).

Comparing and evaluating the child health care systems of different European countries is a bit like studying travel guides when planning vacations in Europe. Both will provide information on geography, history, demography, economy, technology, and most importantly, the behavior and culture of other people and nations. Identifying and interpreting differences in the infrastructure of countries and the variations in processes affecting lifestyles may lead to inspiration and irritation at the same time. Unbalanced intercultural comparisons and reviews may create stereotypes and prejudices, which have substantially contributed to past political crises in European history. Diversity means understanding that each individual or nation is unique and recognizing this individual or national difference. These variations can manifest themselves in the dimensions of mentality, ethnicity, sex, culture, socioeconomic status, religious beliefs, political beliefs, and medical care. The medical field of pediatrics is characterized by the diversities, variations, and heterogeneities of child health care services provided in 53 European countries with more than 200 million children below 18 years of age.

The European Paediatric Association (EPA)-Union of National European Paediatric Societies and Associations (UNEPSA) embraces the strategy of building bridges between and among medical and nonmedical experts.¹ The aim of EPA is to educate without being limited by boundaries, across country borders, while respecting national idiosyncrasies. EPA strives to expand activities on planning, performing, and publishing studies on child health care services in Europe. A publication of surveys alone should not be the end result of EPA projects. Implementing theory into practice in all European countries will instead be the main ambitious aim. These EPA projects endeavor to attract all those experts in the field of child health care who would like to work with EPA to improve child health by putting children and young people into the center of all their activities. This supplement on the diversity of child health care services in Europe will deal with many aspects of the heterogeneity of child health care systems in 22 representative European countries.

Four key elements characterize the essence of child health care and the clinical and scientific interchange among pediatricians: knowledge, technology, caring, and values. Although the nature, quality, and mix of the above 4 indicators can vary widely within different circumstances, each of them is usually present in medicine and includes a variety of single subgroups.

The beginning of this introduction deals with values, the most neglected of the 4 elements. In the field of general health care, the enormous benefit of successful communication between professionals, patients, and physicians is well documented. Because there are different types of communication, medical universities have, therefore, started to integrate varying amounts of professional communication training in their curricula. Effective physician-to-child communication is a necessary prerequisite for comprehensive pediatric care.^{2,3} Communication between pediatricians

EPA	European Paediatric Association
EURYPA	European Young Paediatricians Association
GP	General practitioner
SPA	Strategic Pediatric Alliance
UNEPSA	Union of National European Paediatric Societies and Associations

From the ¹Children's Hospital, Hannover Medical School, Hannover, Germany; ²EPA-UNEPSA, Berlin, Germany; ³Scientific center of Children's Health, Moscow, Russia; and ⁴Institute of Pediatrics, University of Foggia, Istituto di Ricovero e Cura a Carattere Scientifico "Casa Sollievo", Foggia, Italy

Please see the author disclosures at the end of this article.

0022-3476/\$ - see front matter. © 2016 Elsevier Inc. All rights reserved.
<http://dx.doi.org/10.1016/j.jpeds.2016.04.036>

and children and young people, however, differs fundamentally from communication between general practitioners (GPs) and adults, thus making a specific child communication training an indispensable requirement. Communication between care givers is an equally demanding challenge. In fact, cooperation has always been an important value and basis of science. In the 20th century, the team approach has proven to be superior to the situation of an isolated researcher of the 19th century. Other than merely the financial background, the ability of medical colleagues to cooperate determines the success of treatment. Yet, the outcome of child health care does not only depend on care givers, it also depends entirely on cooperation with children and their families.

“Sportive” competition of experts ranks among the top motivators in modern medical research. All pediatric scientists want to be the best of the best. There is, however, a considerable risk in deleterious competition: it inevitably is counterproductive. Miscommunication of research results, mismanagement, noncompliance, different concepts of the nature of the illness, different health beliefs, values, and preferences of physicians and patient families limit the potential benefits of both technology and caring.

Globalization, the new slogan of the mid 1990s, meant global markets for businesses. Global medical care, however, means provision of information and standardized health care for all. Fifty years ago, activities in international health care were the domain of the World Health Organization, governments, and nongovernmental organizations. This has changed.⁴ Today, new players, including EPA-UNEPSA and other societies, influence international health care guidelines. At the end of the 20th century, global cooperation in pediatric care was poised to open a new chapter in pediatrics. This initiative was based mainly on personal friendships of pediatricians worldwide, who frequently met at international meetings. In the intercultural field, pediatricians were vulnerable to distortions stemming from 2 directions. First, they were cocooned within the implicit perceptions of their own culture. Second, they were frequently taught theories, assumptions, and hypotheses that created barriers between them and other cultures that were being studied when attempting to acquire cross-border knowledge.

Evidence suggests that global access to medical information has a positive impact on the quality of child health care. International meetings, in particular, have the potential of promoting understanding and addressing differences in policy and practice between different nations. Why should prevention have a higher priority in one nation compared with another? Why should one immunization schedule be different from another when using the same vaccines? An EPA-UNEPSA survey also reveals that a number of European pediatricians had insufficient access to scientific journals or electronic data banks of medical literature. In 2013, many Eastern European pediatricians did still not have the financial resources to attend international congresses nor did they speak and understand English well enough to communicate with foreign experts via e-mail.

Effective learning depends on active participation rather than passive engagement. There is an increasing evidence base on the efficacy, efficiency, and overall impact of different teaching and learning methods in health care. Cochrane data showed that educational meetings alone had little effect but when combined with other interventions can improve professional practice and health care outcomes for patients.⁵ Using this evidence will help structure postgraduate training and meetings to increase their effectiveness and value.⁶

In 2013 there was, in fact, no European-wide standard definition of training and accreditation of pediatricians.⁷ National guidelines for training in pediatrics showed great and sometimes unnecessary and avoidable variations. A basic 3-year common trunk training in general pediatrics followed by 2-3 years of higher specialty training was not offered in all European countries.⁵ Higher specialty training in pediatric subspecialties should be based in well-established and highly-specialized centers of competence for the treatment of acute and chronic diseases with a high-throughput of patients, the full range of diagnostic facilities, and collocation of interdependent specialties and facilities. These centers should be a part of academic departments of pediatrics, in which research is an integral activity and that link to the clinical networks providing care.⁸

What is the future of pediatrics and child health care? The European academic pediatric community has reached a better level of communication and cooperation since 1990, however, the common goals to be achieved in child health care still need to be defined and harmonized. What have leading European pediatricians achieved, and what do they desire to achieve in the future? It is our opinion that pediatricians should not aim at creating a professional monopoly, but they should instead set standards in child health care and actively cooperate with other professional groups and organizations representing patients. In primary care, pediatricians should initiate and possibly lead multidisciplinary teams of child health care. In tertiary care, pediatric subspecialists should focus on the diagnosis and treatment of children with rare and severe diseases and actively collaborate with general hospital teams so that care can be provided close to home when it is safe to do so. This collaboration should allow comorbidities that do not require specialist care and support for parents and siblings to be delivered locally for the convenience of families. This also includes centers for rehabilitative care for children who have undergone complex interventions. It should be clear which measures need to be taken to guarantee comprehensive family-friendly health care, to treat a child's comorbidities, and to support and strengthen non-affected family members. To avoid fragmentation of pediatric care and to integrate these centers into the classic organizational structure of primary, secondary, and tertiary pediatric care is of utmost importance. A successful approach should be the centralized organization, coordination, and decision making by special care centers, and decentralized provision of treatment whenever possible. This consensus should be based on good clinical leadership and

governance, shared values, common protocols, competent clinicians throughout the network, and sportive well-meaning competition.

Where are the pitfalls in such a concept? There are indeed a number of limitations to local and global cooperation. In 1989, Hall and Hall⁹ noted that scientists in the intercultural field are vulnerable to distortions. Subconsciously, they look at another culture through eyes which, from birth, were conditioned to see things in a particular way. Until now, there has not been an easy way to transcribe national behavior from one culture to another. With this important point in mind, there is no better way for pediatricians to understand cultural differences than through studying and working abroad. Culture is something national or at least regional. It is based on verbal communication behavior and material goods.

After 9 years of research on the large differences that exist in medicine practiced in United Kingdom, US, France, and Germany, Payer came to the conclusion that these differences were based on unique national characters or idiosyncrasies and not so much on scientific findings. Those different nationalities tended to assume that any deviation from what they perceived as the medical norm occurred only because other countries lacked the knowledge, the resources, the organization, or the will to do as they do. This point of view assumes that everyone works toward the same goals, some countries doing so more successfully than others. Assuming unlimited financial resources, individual goals still might not be the same because of different priorities.¹⁰

With these thoughts in mind, the members of EPA started to think more practically about European child health care. In 2009, EPA wanted to know first how many pediatricians worked in Europe and how many would be ready for a global cooperation. There were, however, no complete data sets available. The number of European pediatricians was extrapolated from the reports of presidents of the different national pediatric societies. This number amounted to roughly 200 000 pediatricians working in 53 different countries and caring for approximately 200 million children below 18 years of age. The proportion of general pediatricians working in outpatient settings and pediatric subspecialists working in hospitals was estimated to be 50:50. Less than 10% of all trained pediatricians worked in institutions that were not solo practices, polyclinics, or secondary and tertiary care children's hospitals. The European child population treated by GPs and nurse practitioners was not known.

In a second EPA project, miniquestionnaires were sent out by EPA-UNEPSA asking very basic demographic and policy related questions on primary child health care.¹¹ In the 1990s, there were at least 3 different primary pediatric care systems in Europe: (1) pediatric system in which more than 75% of primary care was provided by pediatricians, with a ratio of 1 pediatrician (generalists and specialists) per 600-1250 children; (2) intermediate system with 50/50 care provided by pediatricians and GPs, and a ratio of 1 pediatrician per

1250-2500 children; and (3) the family doctor system with 75% of primary pediatric care provided by GPs and a ratio of 1 pediatrician per 2500-7500 children.¹¹

In 2015, the spectrum of primary pediatric care systems showed a larger variation than just these 3 types. Some countries kept the family doctor system (eg, Ireland), but in other countries these practices had developed into multidisciplinary teams offering complex child health care by nurse practitioners, psychologists, and pediatricians (eg, Sweden). Fourteen countries had changed from a pediatric to a GP system (eg, Macedonia). Other countries were unchanged and keeping solo-pediatric practices (eg, Italy) or the pediatric polyclinic system (eg, Russia). These different health care system reforms were not related only to the disintegration of the Soviet Union in the 1990s or the economic crisis in 2008. Moreover, national health habits and readiness to change a given health care system also seemed to have had an important influence on adapting the existing structure of medical health care service to new needs.

In a joint project of EPA and the European Paediatric Society for Nephrology, the number of pediatric renal subspecialists and specialized pediatric kidney centers per 1 million children were analyzed in the 1990s within Europe.¹² Some countries did not have highly specialized pediatric centers at all, which reflected a poor economic situation as well as a small total child population. Unfortunately, EPA has not yet been able to collect equivalent data on tertiary pediatric care and on the other pediatric subspecialties.

Ongoing EPA projects try to shed light on various other aspects of health care. Several countries had a short list of metabolic laboratory screening programs for 2 or 3 diseases in 2009; other countries tested for more than 20 diseases. The round table discussion with presidents of national pediatric societies revealed that it is still a matter of debate whether more than 10 newborn metabolic screening tests are needed. There was also a wide range of very few to 29 routine medical check-ups for children from infancy to the age of 18 years, and the evidence base for the superiority of one system to the other is lacking. In some countries, the scientific use of individual electronic health (or medical) records in 2014 was substantially hampered by national data safety regulations (eg, Germany). Pediatricians in several countries did not report children with long-term conditions or rare diseases to the specialized international registries, and they also did not have their own national registries of the kind. Even in highly-developed countries, there seems to be a lack of registries on diseases and statistics on pediatric workforces.⁵ In many Eastern European countries, there was a paucity of multicenter randomized, prospective, and controlled therapeutic trials. Data protection laws that could explain this unfortunate situation generally were not a major problem in this matter. In 2014, there seemed to be a wide range of interests among pediatricians of various countries when it comes to priorities in child health care. Using a score system for priority setting of pediatric care in 40 European countries, 31% of countries reported to EPA obesity and

diabetes mellitus, 29% asthma and allergy, 18% neurologic disorders, and 12% psychosocial disorders.

The Aims of This Supplement Reporting on Child Health Care Services in 22 European Countries

This supplement seeks to fill a gap of knowledge concerning diversity of child health care services in Europe. As quality of scientific articles is based upon completeness and accuracy of data, this supplement may be criticized for not having collected manuscripts from all 53 European countries. In fact, only the very small countries with less than 100 000 inhabitants were excluded from the survey. All presidents of national pediatric societies and associations of the remaining 46 countries had been contacted over a period of 2 years. In summer 2015, the number of newly submitted manuscripts had come to a minimum and the editors decided to stop collecting further manuscripts in order to avoid a further prolongation of publication. The 22 reporting countries are representative of the economic, cultural, and political spectrum of all 53 European countries. Statistical data was obtained from World Bank database or World Health Organization, Regional Office for Europe unless otherwise stated. Authors were asked to concentrate their reviews on strengths and weaknesses of national health care services, as well as priorities and trends of future activities and current opinions and policies. By contrast, it was not the aim of national reports to put health statistics in the center of the articles. In summary, although many personal and scientific contacts existed in 2015 among European pediatricians within the frame of EPA-UNEPSA activities, learning without boundaries and communicating across national borders remains a challenge in the multilingual continent where facts and knowledge may get lost in translation. A productive and lively cooperation between all European caregivers and stakeholders in child health care services needs further stimulation to better understand why the systems differ so much.

We would like to comment on the lack of cohesiveness in the 22 articles in the supplement. All first authors had been given the same guidelines by which they were asked to report their findings and analyses. The diversity of the format of their articles may be due to a number of variables. Different priorities of reporting pediatricians reflected the heterogeneity of health care services. Furthermore, some meaning may have been lost in articles by presidents without English as a mother tongue. The future EPA activities should work toward clarifying unavoidable and unwanted misunderstanding of involved societies.

The History of EPA Research and Excerpts of Previous EPA Publications

Managing health care for infants, children, and adolescents in Europe requires balancing clinical aims, research findings, and socioeconomic goals within an international environment characterized by cultural and economic complexity

and a large disparity in availability, affordability, and accessibility of pediatric care. Since 1976, by involvement of 2 generations of European pediatricians, the EPA-UNEPSA, formerly just UNEPSA, has been trying to establish this balance.

The first generation of EPA-UNEPSA members observed with great concern that the rapid expansion of diagnostic and therapeutic facilities in Western European countries was not followed by a similar development in Eastern Europe, thus, widening the gap of diversity of European child health care. Therefore, UNEPSA pioneers initiated an ongoing communication and intensive cooperation between leading Western and Eastern European pediatricians in order to achieve a consensus and harmony in the numerous areas of health provision for children in Europe.

The second generation of pediatricians realized that because of the expansion of scientific knowledge, technology, and specialization, pediatrics was at the risk of fragmentation into, and replacement by, an increasing number of subspecialties. This evolution would have countered the right of all children and adolescents to receive medical care as a holistic approach. After witnessing the extraordinary and positive results of subspecialty care in its role of advancing and promoting child health, EPA-UNEPSA particularly focused its attention on the aim of maintaining strong general pediatrics. To strengthen their role of providing primary care to children and adolescents, intercultural support to general pediatricians will be offered by EPA. In recent years, EPA also started a close cooperation with other societies/associations that offer health care to children (eg, parents' organizations, GPs, family doctors, organ specialists, nurses, psychologists, other stakeholders in today's complex health care systems), inviting them to the congresses, such as EUROPAEDIATRICALS, for an active exchanges of ideas.¹³

Children have no voice in society and sadly, their caregivers do not speak with one collective voice. In many European countries, this has led to a considerable barrier to improving equity of child health care. The vulnerable child was, therefore, placed at the center of all EPA activities. EPA respects the rules on child development, which state that an adolescent is not a young adult, a school child is not a small adolescent, an infant is not a small child, a neonate is not a small infant, and a premature newborn is not a small neonate. Furthermore, pediatricians are not "small doctors," and child health care is not requiring less investment than adult health care if the life cycle principle and the root-cause-effect-outcome concept are respected. Pediatricians should care for both healthy and sick children. Pediatric health care should focus on the patient and not only on the disease. During the congress of EUROPAEDIATRICALS 2015, EPA organized a symposium for and with Florentine students from a local gymnasium. The rights of children to health were discussed by young people and world experts¹⁴ focusing on how theory of participation of young people in medicine can be transferred into practice.¹⁵

Furthermore, EPA invited the European Young Paediatricians Association (EURYPAs) to organize a symposium

focusing on the needs of pediatricians during postgraduate training. The most important problems reported from Turkey were related to the intensive work schedule and shift hours during training, lack of adequate education, and worries about being subject to oral or physical harassment by parents. EURYP and EPA decided to improve international networking and communication among pediatric residents by establishing e-mail groups or Facebook groups. Young European pediatricians want to facilitate homogeneous pediatric education in all EPA member countries by promoting e-learning especially on general pediatric topics. Last but not least, EURYP and EPA are planning to pair one young pediatrician to one of the EPA Board members in order to cooperate more actively and efficiently on European research projects.

Medical care is only a small part, namely 15%, of total health care. Therefore, the purpose of EPA research is to introduce an emerging practice of individual, community, social, and societal pediatrics that integrates the principles of a child's right to health, equity, and social justice. EPA aims to promote the development of such systems and the generation of public policy in child health care. The Council of Europe, which convened in 2011, published the "Child-Friendly Health Care Model," outlining sustainable development, which fulfills the needs of the present generation without endangering the needs of future generations. The main 5 elements of the terms of reference stipulated by the Council of Europe were protection, prevention, provision, promotion, and participation.¹⁶ These terms were signed by 47 European Health Ministers.

"Health economics is not the enemy of child friendly health care, which depends in part, on better investment in the provision of social, environmental, and medical determinants to improve health. Health economics is an emerging science with a considerable relevance to child health care."¹⁷ Health economics is one of many elements within decision making that is particularly important in times of austerities, rationing, and difficult prioritization within health care systems.¹⁷ A discussion on costs, value, and economic evaluation related to health should be discussed on a European level involving all 53 countries and not only the European Union. The right to health does not imply the right to be healthy, nor does it mean that economically weak countries must offer expensive treatment. It does, however, require fair-play in offering care when age, sex, ethnicity, culture, socioeconomic status, religious beliefs, political beliefs, or other ideologies of patients are concerned.¹⁴ Priorities of medical care for children differ between countries, nonetheless, equal health opportunities must be granted to all age groups in every country. Cross-border care should be improved and international pathways must be organized if there is no adequate treatment available in a given country.¹⁸

EPA endeavors to open a worldwide in-depth discussion on how the theory of child health care services can be translated into practice and how pediatricians can cope with this enormous challenge. Therefore, EPA publishes monthly articles in the EPA Pages of *The Journal of Pediatrics* dealing with

"hot topics" and aiming to start a debate on an international level. There is currently no Europe-wide "databank" that permits comparative studies of service outcomes to encourage health care service research relating to infants, children, and young people. In order to improve future services, EPA surveys aim to improve the knowledge base regarding diversities in pediatric and child health care systems in 46/53 European countries. Understanding how and why services work, as well as linking structure and process to experience and outcomes, is essential at a time of economic recession. It is common knowledge that the quality of child health care depends considerably on the impact of geographic factors such as urban or rural areas. Demographic factors such as the size of the pediatric population affect the quantity of pediatric care, which in turn severely influences health care service systems. Of the 53 European countries, almost one-third have less than 3 million inhabitants, with populations of approximately 15%-35% below 18 years of age. Various countries have a large child population, which exceeds 10 million young people per country.

EPA questionnaires on the diversity of pediatric care were completed in 2009 and in 2014 by 46/53 European countries. The reported data reflect great interest on the part of presidents of national pediatric societies in improving health care in their own countries. Especially, the comments in the open questions section regarding topics such as the priority of pediatric health care exposes certain dissatisfactions and emphasizes room for improvements. Results of the previous EPA surveys lead to the conclusion that the existing inequalities in the health status of children and adolescents within Europe are unacceptable and, therefore, should be of common concern to all pediatric societies. Adequate, affordable, accessible, and available health care, as well as equity, efficacy, and efficiency of care must be guaranteed. Teams of care givers need internationally-standardized postgraduate training, national accreditation, continuous national and international medical education, and local supervision.

Health equity indicators must measure the root-cause-effect-outcome determinants. The social, economic, political, cultural, and environmental determinants on child health and well-being must be analyzed in the context of formative and summative assessments of all aspects of state, as should be the efforts by professionals and stakeholders to fulfill the health rights of children.

Excerpts from Round Table Discussions during EUROPAEDIATRICS in Moscow, Vienna, Glasgow, and Florence, 2009-2015

EPA organized round table discussions with presidents of national pediatric societies and other experts during the course of European congresses, which were attended by 60-150 participants and lasted 180-240 minutes. These reunions allowed a multilateral exchange of knowledge and opinions and started a fruitful bilateral cooperation during and after the congresses.

The round table discussion of 120 international pediatricians in 2009 in Moscow served the purpose of identifying variations in European child health care concerning prevention and provision of medical care for children. Several months before the congress, a miniquestionnaire had been sent to presidents of national pediatric societies, and/or to senior university pediatricians and designated experts in 46 of 53 European countries (excluding only small countries, such as Lichtenstein, San Marino, Andorra, etc.), asking for demographic data on preventive care.

In 42 of 46 European countries, a special booklet for the documentation of ambulatory clinical examinations during childhood was provided, containing information on administrative facts (eg, health insurance) in 63% of countries, vaccinations in 97%, height and weight percentiles in 85%, results of clinical examinations in 87%, and other information (eg, screening results, hospital admissions, previous diseases, dental status, family history) in 68% of countries. In 75% of countries, this medical passport was kept by parents, and in 25% it was kept by medical institutions or both (eg, Israel). The median number of routine clinical investigations offered to children to 14 years of age was 12 (range, 1-29). On average, 87.7% of infants (median, 90%) attended the proposed check-ups, with a range of 50%-100% in European countries. The mean percentage of school children aged 6-14 years attending routine examinations was 64% (median, 70%; range, 0%-100%). Only 24% of countries had registered data available, and in the remaining 76% of countries experts reported estimates. In 61% of countries, parents were sent a reminder if they had not brought their child to the primary care physician for a routine examination.

Ninety-three percent of countries provided a special laboratory screening for neonates. The number of tested diseases ranged from 1-12 (mode, 2 diseases). The time of blood sampling after birth varied from 0-10 days (mode, 4 days), which correlated with the type of analytical tests (eg, in 60% of countries using tandem mass spectrometry, blood was taken mainly at 0-3 days after birth). The conditions were phenylketonuria and hypothyroidism. In countries with a federal structure (eg, Germany), the number of screened diseases varied from region to region. Urine screening for hematuria, leukocyturia, and proteinuria was performed in one-third of nations. The age of children at the time of urine screening ranged from 3 months to 6 years. Screening for hip dysplasia was performed in one-half of the countries, which also provided data on the age of investigation (range, birth to 2 years of age; median, 0.13 years).

Eighty-nine percent of European countries offered free chemoprophylaxis for vitamin D deficiency rickets. Chemoprophylaxis for caries was given to children in 54% of countries. Prophylactic vitamin K for neonates was offered routinely in 16% of countries, and iron supplementation was offered routinely for infants in 11% of countries.

All 46 countries routinely vaccinated against diphtheria, pertussis, tetanus, polio, mumps, measles, and rubella. Ninety-three percent of countries reported vaccinations against *Haemophilus influenzae* b, however, in some countries

immunization was not performed in the total child population. Six countries reported additional compulsory immunizations, namely human papilloma virus for girls, rotavirus vaccine for infants, or influenza vaccine for children with long-term conditions. Pneumococcal conjugate vaccination was offered in one-half of the countries. Selected groups of children received meningococcal or varicella vaccinations in 39% and 35% of countries, respectively. Bacillus Calmette-Guerin vaccination was administered in 66% of countries, however, in tuberculosis-free countries, it was only given to children of migrants.

The Round Table Discussion in Vienna in 2011

The 2011 round table in Vienna aimed at identifying variations in European child health care concerning emergency care and hospital care and was attended by 80 pediatricians from 30 countries.

Emergency Care. Pediatric surgeons or trauma surgeons were the main providers of trauma care in 21%, and adult trauma surgeons in 18% of European countries, respectively. Community pediatricians were the responsible care providers in 11% of countries. GPs offered trauma care in only 1 country. In 48% of countries, all of these care providers were more or less frequently involved in trauma care.

High-grade emergency care (eg, meningitis, shock) for children was equally provided by both secondary and tertiary care hospitals in 12 countries (27%). Seven countries (16%) reported tertiary care hospitals as the only medical institutions, and 14% of countries reported "mainly" tertiary but "some" secondary care hospitals. In 6 countries (14%), the majority of pediatric patients were cared for equally by secondary care children's hospitals and in adult hospitals. Five countries had specialized emergency care hospitals/units. Four countries named only secondary care hospitals.

Hospital Care. Both secondary and tertiary child health care was offered in children's hospitals and units situated within larger general hospitals, or in specialized children's hospitals, university children's hospitals, or mother-and-child centers. The number of all pediatric units/hospitals varied from a few to over 2000 (the latter in the Ukraine and Russia). Highly specialized children's hospitals were reported by 80% of responding countries. Twenty-one countries (53%) had less than 5 specialized children's hospitals. The number of university children's hospitals ranged from 0 (Luxemburg) to 52 (Turkey) (mode, 1; median, 5 countries). Mother-and-child centers offering obstetrics and neonatology only operated in 26 countries with a range from 1 (11 countries) to 260 centers (Turkey).

Fifty-four percent of all European countries financed hospital care through their national health system. In 57% of the responding countries, heads of pediatric departments were in charge of their unit's budget. Thirty-seven countries (90%) regularly confirmed information provided by the heads of pediatric departments on fixed and variable expenses of personnel, diagnostics and therapeutics, investments, supplies,

and infrastructure. Thirty-eight countries (88%) stated that heads of pediatric departments regularly received information on the budgets of their units.

The round table in Vienna closed with words of caution. A high quality of data on European child health care services requires complete and accurate data. Numbers presented during the round table very likely presented the most complete data available on pediatric health care in Europe. It included statistics on 46 European countries, their accuracy, however, was not cross-checked in smaller sessions and smaller groups of national experts that followed. Furthermore, there were more than 30 different European pediatric subspecialty societies that had not been asked by EPA to provide data related to their own surveys (if carried out). When investigating different issues of pediatric health care, a sportive competition among these European societies might be helpful. This, however, may be counterproductive if the aim of a single society is a monopoly of knowledge. It was agreed that cross-linking, networking, and fair play provide the basis for building strong intercultural/international bridges, irrespective of possible future austerity measurements in countries facing a financial/political crises.

The Round Table Discussion in 2013 in Glasgow

The 2013 round table in Glasgow concentrated on the diversity of pediatric subspecialty care in Europe. In a wider sense, the term pediatric subspecialist denotes pediatricians and surgeons who provide specialized care for infants, children, adolescents, and young adults, thus, separating them from general pediatricians, primary care physicians, and specialists in adult medicine. Pediatric subspecialists need to have obtained a subboard certification in one of the chosen subspecialties. Prior to the Glasgow congress, a miniquestionnaire had been sent to presidents of 46 national pediatric societies asking: "Are any pediatric subspecialties recognized by your government?" Data were received from 29 of 46 countries. A total of 38 different pediatric subspecialties were reported. Of these 29 countries, 23 had a range of 1-20 recognized pediatric subspecialties. Six countries reported no recognized/certified subspecialty. Eleven countries reported more than 10 subspecialties.¹⁹ New questions about the role of pediatric subspecialists were raised by this discussion. It was unclear which proportion of subspecialists worked as general pediatricians with a particular interest in a subspecialty care. Were they, for example, highly specialized experts with one subspecialty only or did they work as experts in more than one subspecialty (eg, combinations of hepatology plus gastroenterology plus nutrition, hematology plus oncology plus hemostaseology, nephrology plus endocrinology)? No data were available on the location of these subspecialists. Were they practicing in academic hospitals, secondary care hospitals, private pediatric, or polyclinics? Furthermore, it was unclear how many subspecialists per 100 000 children were registered in various countries. What were the incentives to become a subspecialist? Was it reputation, finances, or academic research? Did career choices meet the expectations of subspecialists?

It was also discussed whether national child health care systems provided complex information on accessibility, adequacy, and quality of subspecialty care. What proportion of visits to a primary care physician (GP or pediatrician) resulted in a visit to a subspecialist? Were there long waiting periods for pediatric subspecialty treatment in the urban or rural areas of some countries? Did visits to a subspecialist reduce the number of visits to a generalist? Did subspecialty care induce discontinuity of care because of a lack of communication between subspecialists and generalists?

Does cross-border care (ie, across countries) provide an answer to the problem of missing subspecialists in some countries? In 2010, cross-border health care was established in 27 European Union countries and to a lesser degree in the remaining 26 European nations. At the time, there was a paucity of demographic data on pediatric cross-border health care in Europe and international support from health care providers varied.

The Round Table Discussions in 2015 in Florence

The 2015 round table meetings in Florence were attended by a total of 300 participants and aimed at identifying variations in several aspects of European child health care.¹⁹ Limitations of pan-European approaches to reduce unnecessary variations in child health care were also discussed. The question of why European pediatricians generally were underrepresented in the group of decision makers in national and international organizations was raised. Answers given were as follows: lack of language skills, time, finances, and labor force. There also seemed to be a lack of interest concerning international social responsibility among pediatricians. It was generally perceived that European pediatricians lacked sufficient training and experience in public health and international pediatric cooperation. In addition, two-thirds of the presidents of national pediatric societies of countries formerly belonging to the Soviet Union, who had experienced a forced change of their health care system from the Semashko health care model to a Western model, reported substantial new problems of primary child health care.

It was concluded in 2015 that there may be a need for professional pediatric societies to establish standards and pathways for guided cross-border pediatric care in Europe. Similarly, the question of whether a migration of pediatric subspecialists could provide the answer to problems of inadequate subspecialty care in other countries was raised.

As the discussion closed, it was concluded that EPA should analyze the dimension of the problem of inadequate pediatric subspecialty care in Europe by evaluating the total number of different pediatric subspecialists on a regular basis. Investigating the number of annually trained subspecialists, as well as their training standards would also be necessary. Last but not least, this would also require comprehensive information on infrastructure and working processes of specialized pediatric centers.⁸

The Future of Pediatric Congresses. A debate was begun at one round table about the future of financing international pediatric congresses and how these can better contribute to the education of pediatricians. EPA outlined the necessary steps to surmount inefficiency of training during international conferences, which may be overcome by using innovative strategies for future pediatric congresses.⁶ Pediatric organizations can only deliver international social responsibility in relation to congresses if it is embedded in a clear governance and ethical framework. This strategy is built upon clarity of purpose, clear benefit for the health of the children of Europe, collaboration, professional integrity, and trust. We conclude that there is a requirement to rethink the focus, purpose, methods, location, and costs of future international pediatric congresses such as EUROPAEDIATRICALS. The opportunities to learn through comparative international experience is infinite, ranging from policy to practice, but to achieve real change that benefits the health of children and young people congress organizers should rethink their purpose and focus on people not profit.⁶

Child's Rights to Health. Implementing a child's right to health from theory into practice in all European countries was a topic at another round table.²⁰ This session was not only attended by experts but also by 35 students (17-year-olds) from a Florentine high school who participated in this lively interchange. It was discussed whether the present generation of European adults is prepared to protect young people characterized by existential vulnerability. Second, it was debated whether pediatricians have a convincing concept in preparing European children for a future healthy life. When asked to report their own views on children's rights, the students showed a great interest in the proactive participation of children in medicine and emphasized their own wish to learn more about the rights to health. They were especially appalled by a Turkish report on the worrying situation of under-aged brides in Anatolia.

Thirteen presidents of 17 countries reported that paragraphs of the United Nations Convention on Children's Rights had been observed and included in their respective constitutions. In all of these 17 countries, nongovernmental organizations guarded children's rights to health. The concept of a child's right to health had not been successfully transferred from theory into practice by primary care pediatricians. When asked, approximately one-half of the 60-70 pediatricians from each of the 17 countries admitted a lack of knowledge regarding the Convention on the Rights of a Child. (Manuel Katz, 2015, personal communication).

Diversity of Child Health Care Services. A third round table focused on the diversity of child health care services in Europe. It aimed at identifying difficulties of learning across borders in order to avoid unwanted variations in child health care services in Europe. Prior to the meeting, a miniquestionnaire had been mailed to the presidents of national pediatric societies. The policy question posed was "What does your society expect from EPA in the future?" The 3 general answers were: (1) to increase their knowledge base, EPA is to inform

national pediatric societies on European trends in child health care services; (2) the presidents wished for advice when it is difficult to find a national consensus on controversial issues; and (3) national pediatric societies requested that EPA support them in negotiations with their politicians or other decision makers when implementing necessary changes in their health care system.

To harmonize national health care systems with international standards, presidents also asked EPA to provide service guidelines. One president wrote to EPA: "There are huge variations in the way that services to children and families are delivered. It would be good for me to understand what works and why it works in other countries. In order to introduce innovation and improvement more successfully, I would like to learn from other people's experience." Another president suggested the publication of policy documents and international recommendations in different fields of pediatrics. To lead local politicians to accept international standards, these would be especially important. One of the most frequent suggestions by presidents of pediatric societies was that EPA should provide prevalent recommendations on primary care management for general pediatricians and GPs. Some national presidents proposed European regulations stipulating that pediatricians only be responsible for primary care until school age.

In conclusion, the demand for communication and cooperation on a European level to better understand how and why child health care systems differ from country to country was widely expressed.²¹ In addition, there was a general request to improve services and training of pediatric care providers, as well as the outcome of care by research on evidence-based findings of child health care services. The discussion concluded that the risk of the vanishing pediatrician scientist must be avoided by installing and expanding cross-border education programs and fellowships for young pediatricians from smaller countries. Ideally, this training should take place in international pediatrics centers of competence.

Outlook

The recent achievements of EPA has lead EPA Council to believe that broadening of the intellectual basis of EPA and creating a multidisciplinary society will be necessary to increase the chances to avoid fragmentation of pediatrics, and to allow to tackle the legal, economic and organizational challenges of child health care in Europe. Children and young people must be put into the center of EPA activities.

Unlike in the US, there still exists no European Paediatric Society that could coordinate the activities of more than 70 national pediatric societies and European pediatric subspecialty societies. Children seem to have no voice in society, and European pediatricians do not speak with one voice. This unacceptable condition needs to be changed by a series of activities, which will require identification of obstacles and planning of future projects Europe has gone through a 60 years "healthy" era of postnationalistic peace, wealth, social justice, and ecologic responsibility. European citizens

complain about a lack of democracy, and others complain about a lack of guidance. Demographic factors will cause an inevitable generation conflict in most European countries, and children may be losers when it comes to new regulations. We conclude from the press media that there may be a lack of determination of European opinion makers.

Thus, initiating a strategy and atmosphere in Europe for further demographic data collection, communication of data, confidentiality of information, cooperation of analysts, and consensus without low-level compromise of all decision makers seem to be imperative on all political levels and for child health care services, too. Because of the complicated history of Europe, multilingual societies and the persisting conflicts of interest, these efforts will not be easy.

What Are the Priorities for EPA in Relation to European Child Health Care Policy Making?

Goldhagen et al¹⁴ wrote in the EPA Pages of *The Journal of Pediatrics*:

To remain relevant in the future, health care and health systems must function at the intersection of health and human rights. The availability of rights and equity-based strategies and tools, and adoption of numerous human rights documents make this possible. However, national and international health systems remain focused primarily on selective strategies to promote child survival in low-income countries, and access to health care and biomedical approaches to health in mid and upper-income nations. In general, global public and private sector health policies, systems, and practices have arguably not responded to the complexity of the social, economic, political-civil, environmental, and cultural factors that generate health. They have not engaged a rights, equity, and justice-based approach to policy, systems development, and practice. This reflects the on-going tension that has existed between those who understand health as primarily the outcome of social and environmental determinants and those who focus on medical care. The chasm between knowledge and experience and policy and practice must be acknowledged and addressed through public and private sector health policy, medical education, and health service research that is informed by the principles of human rights, health equity, and social justice.

We fully agree with this comment and EPA Council will do its best to promote the initiatives in all countries to enter the child's rights paragraphs into national constitutions, if not already done, and to establish the position of a commissioner for children in national parliaments.

The Strategic Pediatric Alliance

A Strategic Pediatric Alliance (SPA) for the future health of children in Europe was formed in 2012 by the 3 major European pediatric organizations, EPA, European Academy of Paediatrics, and European Confederation of Primary Care Paediatricians, to urgently and effectively address the current lack of public attention to the future health of children in Europe.¹³ The SPA had the support

of many National European Pediatrics Societies and Associations, with the intent of promoting the importance of collective efforts to strengthen the evidence and influence the opinions of governmental administrators, politicians and European Union institutions. It was an alliance action network among existing major European Association, Societies and Confederations, established to better coordinate efforts in the defense of children and their health. The Consortium was open to the major international and national European child health societies/associations/confederations with the objective of promoting strong advocacy and political intervention in order to ensure the delivery of high quality health care to children throughout Europe.

Previous SPA activities had focused on research projects on pediatric workforce in Europe⁵ and on the role of electronic health records (submitted for publication). A position paper on "a shared approach to improve community and primary care services for children, adolescents and their families in Europe" was generated, seeking to inform discussion on the most effective next steps for SPA in order to create strong and effective political interventions and advocacy for the children of Europe with special reference to the primary care settings. This report concluded that "primary care is no longer a single service delivered by a sole practitioner and the new complexities of children's conditions coupled with the impact on their families should be recognised and defined in order to guarantee a competent local team or a multidisciplinary group practice to manage the range of problems presenting to primary and community services within that local population." It also stated that "at present there are no data to support 1 single model of primary care or community service provision that is equally efficient, effective, and equitable in all circumstances. To create equity of outcomes will require different models of service delivery in different places, for example urban vs rural, deprived vs affluent, stable vs migrant communities." This report awaits approval by the different associations before being submitted to publication.

After 3 active years, SPA is far from having condensed the activities of European pediatric associations and societies to 1 "European Pediatric Society," and it is uncertain if it will continue to harmonize diverging programs of different opinion makers.

Future Strategies of EPA

EPA aims at building bridges among European pediatricians and other medical and nonmedical experts. Its motto is learning across borders and respecting geographical, political, and national idiosyncrasies. Expanding on planning, performing, and publishing studies on child health care services in Europe will be in the center of all EPA activities. Special emphasis will be given to implementing theory into practice in all European countries and attracting experts in child care who like to work with EPA for the improvement of child health care on a European level. ■

Author Disclosures

The authors declare no conflicts of interest.

We thank the following colleagues for their contribution of data, discussion, and advice:

Azevedo Ines, MD, Pediatric Society of Portugal; Banicevic Milos, MD, Pediatric Society of Serbia; Bikis Enoks, MD, Pediatric Society of Latvia; Bokenkamp Arend, MD, Pediatric Society of The Netherlands; Burlea Marin, MD, Pediatric Society of Romania; Chiar-elli Franco, MD, Italian Pediatric Society; Fischbach Michel, MD, Pediatric Society of France; Geerlings Heinz, MD, Pediatric Society of Germany; Ghenev Evgheni, MD, Bulgarian Pediatric Society; Grote Ulrike, MD, Pediatric Society of Germany; Hadjipanais Adamos, MD, Cyprus Pediatric Society; Hasanoglu Enver, MD, Turkish Pediatric Society; Hjalmarsson Björn, MD, Pediatric Society of Sweden; Hoey Hilary, MD, Faculty of Pediatrics of Dublin, Ireland; Januario Luis, MD, Pediatric Society of Portugal; Jarmolinski Tomasz, MD, Pediatric Society of Poland; Kanatbayeva Assiya, MD, Pediatric Society of Kazakhstan; Kandelaki Nino, MD, Pediatric Society of Georgia; Katz Manuel, MD, Israeli Pediatric Society; Kind Christian, MD, Swiss Pediatric Society; Klimau Uladzimir, MD, Pediatric Society of Belarusia; Konstantopoulos Andreas, MD, Koskimies Olli, MD, Pediatric Society of Finland; Lie Sverre, MD, Pediatric Society of Norway; Linné Tommy, MD, Pediatric Society of Sweden; Mocnik Vlasta, MD, Pediatric Society of Slovenia; Moya Manuel, MD, Spanish Pediatric Association; Nicholson Alf, MD, Faculty of Pediatrics of Ireland; Nikolovski Ljupco, MD, Pediatric Society of Macedonia; Olah Eva, MD, Pediatric Society of Hungary; Ormisson Anne, MD, Pediatric Society of Estonia; Pilossov Vladimir, MD, Pediatric Society of Bulgaria; Podracka Luda, MD, Pediatric Society of Slovakia; Rittig Soren, MD, Pediatric Society of Denmark; Radziewicz Winnicki Igor, MD, Pediatric Society of Poland; Roncevic Zeljko, MD, Pediatric Society of Bosnia; Roshal Leonid, MD, Union of Pediatricians of Russia; Schmitt Klaus, MD, Pediatric Society of Austria; Stefanidis Constantinos, MD, Pediatric Society of Greece; Szabo Laszlo, MD, Pediatric Society of Hungary; Szczepanski Tomasz, MD, Pediatric Society of Poland; Pop Tudor, MD, Social Pediatric Society of Romania; Valiulis Arunas, MD, Pediatric Society of Lithuania; Vandenplas Yvan, MD, Pediatric Society of Belgium; Zeman Jiri, MD, Pediatric Society of Czech Republic.

References

- Ehrich JHH, Pettoello-Mantovani M, Rubino A. Thirty-six years of the European Paediatric Association-Union of National European Paediatric Societies and Associations (EPA-UNEPSA). *J Pediatr* 2013;161:374-5.
- Damm L, Leiss U, Habeler U, Ehrich J. Improving care through better communication: continuing the debate. *J Pediatr* 2015;167:501-2.
- Damm L, Leiss U, Habeler U, Ehrich J. Improving care through better communication: understanding the benefits. *J Pediatr* 2015;166:1327-8.
- Walt G. Globalisation of international health. *Lancet* 1998;351:434-7.
- Ehrich J, Tenore A, del Torso S, Pettoello-Mantovani M, Lenton DS, Grossman Z. Diversity of pediatric workforce and education in 2012 in Europe: a need for unifying concepts or accepting enjoyable differences? *J Pediatr* 2015;167:471-6.
- Ehrich J, Stengritt D, Jaeger D, Namazova-Baranova L, Pettoello-Mantovani M, Lenton S. The dilemma of international pediatric congresses in Europe: starting the debate. *J Pediatr* 2015;166:504-6.
- Pettoello-Mantovani M, Ehrich J, Romondia A, Nigri L, Pettoello-Mantovani L, Giardino I. Diversity and differences of postgraduate training in general and subspecialty pediatrics in the European Union. *J Pediatr* 2014;165:424-6.
- Ehrich J, Kerbl R, Pettoello-Mantovani M, Lenton S. Opening the debate on pediatric subspecialties and specialist centers: opportunities for better care or risks of care fragmentation? *J Pediatr* 2015;167:1177-8.
- Hall ET, Hall MR. Understanding cultural differences. Yarmouth, ME: Intercultural Press; 1990. p. 13-5.
- Payer L. Medicine culture. London: Victor Gallance; 1988. p. 23-34.
- Katz M, Rubino A, Collier J, Rosen J, Ehrich JH. Demography of pediatric primary care in Europe: delivery of care and training. *Pediatrics* 2002;109:788-96.
- Ehrich JH, El Gendi AA, Drukker A, Janda J, Stefanidis C, Verrier-Jones K, et al. Demography of paediatric renal care in Europe: organization and delivery. *Nephrol Dial Transplant* 2005;20:297-305.
- del Torso S, Pettoello-Mantovani M, Tenore A, Grossman Z, Wolfe I, Ehrich J. A strategic pediatric alliance for the future health of children in Europe. *J Pediatr* 2013;162:659-60.
- Goldhagen J, Mercer R, Robinson G, Duran E, Webb E, Ehrich J. Establishing a child rights, health equity, and social justice-based practice of pediatrics. *J Pediatr* 2015;166:1098-9.
- Ehrich J, Pettoello-Mantovani M, Lenton S, Damm L, Goldhagen J. Participation of children and young people in their health care: understanding the potential and limitations. *J Pediatr* 2015;167:216-8.
- Lenton S, Ehrich J. Approach to child-friendly health care—The Council of Europe. *J Pediatr* 2015;167:216-8.
- Gerber-Grote A, Lenton S, Amelung V, Pettoello-Mantovani M, Ehrich J. Starting the debate on the role of health economics to support child friendly health care in Europe. *J Pediatr* 2015;167:944-5.e2.
- Salzer-Muhar M, Pollak A, Aufricht C, Ehrich J, Lenton S. European challenges: cross-border care for children. *J Pediatr* 2012;161:574-6.
- Stephenson T, Pettoello-Mantovani M. 7th Europa paediatrics, Florence, Italy, May 13-16, 2015. *J Pediatr* 2015;166:213-4.
- Anonymous "The child's rights to health" Translating principles into practice. EPA-UNEPSA Symposia at the 7th Europa paediatrics. Florence: Italy; May 15, 2015, <http://www.epa-unepsa.org>. Accessed August 24, 2015.
- Wolfe I, Thompson M, Gill P, Tamburlini G, Blair M, van den Bruel A, et al. Health services for children in Western Europe. *Lancet* 2013;381:1224-34.