

Healthy children  
for a healthy world



INTERNATIONAL PEDIATRIC ASSOCIATION

International Pediatric Association Newsletter

Year 2016; Vol. 11; Issue 1

ISSN 2410-7069

[www.ipa-world.org](http://www.ipa-world.org)

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### Edition summary

### Page

Message from the President	2
Message from the Chief Editor	3
IPA ongoing activities	
– IPAF Report	4
– UNICEF Statement “Unless We Act Now”	5
– WHO Commission on Ending Childhood Obesity	6
– IPA and Post-2015 SDGs	7
– Inappropriate Promotion of Infant Foods	7
News	8
Global Clinical Practice	12
Hot Points in Pediatric Care & Prevention	19
28 <sup>th</sup> IPA Congress	21
Calendar of events	23

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#### ISSN 2410-7069

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## Message from the President

Dear colleagues,

Greetings from the International Pediatric Association (IPA) and welcome to an enriched issue of our newsletter!



Dedicated to our main goal of making the difference in the lives of our children we continue to support a number of initiatives, among which UNICEF's statement "UNLESS WE ACT NOW", about the impact of climate change on children and many others which are better analyzed in the pages of this issue.

I am happy to say that the preparations for our **IPA 2016 Congress**, scheduled to take place in **Vancouver-Canada, on 17-22 August 2016**, are continuously progressing. A first draft of our preliminary program is already available and posted in [IPA 2016 Congress website](#). As you will see the program features many prominent speakers, representing not only all geographical areas all around the world, but also International Stakeholders representatives such as WHO, UNICEF, World Bank etc. Dedicated to our goal of developing an outstanding scientific program of high scientific value, we came up with a full 5-days program, including an exciting mix of plenary lectures, more than 50 Symposia and 24 Meet-the-Expert sessions all covering the 4 thematic streams: Prevention, Promotion & Public Health, Technology & Health Care, Innovations and State of the Art in Pediatric Care, Global Health and Health Care Systems.

Congress [registration](#) and housing are also open, so I encourage all of you to visit the [official congress website](#), register and take advantage of reduced registration rates. We expect that all of you will join us in Vancouver this August, so as to make the IPA 2016 Congress the meeting point of all Pediatricians all around the world!

*Concluding, please allow me to convey my warmest wishes for a happy and prosperous new year, full of good health and prosperity. I do wish that this year would be free of war, hunger, and suffering, all around the world!*

Warmest regards!

**Prof. Andreas Konstantopoulos**  
IPA President



## Message from the Chief Editor

Dear Readers,



We wish you all the best for the New Year after a reasonable Season. This New Year comes packed with work in all the field of IPA action. Judging by the unstable situation after the open or cold wars, the growing liaisons with health institutions and daughter societies and the 28<sup>th</sup> IPA Vancouver

Congress with the scientific and administrative (elections) issues our workload could be heavy.

The Newsletter itself will also increase its editorial duties. The ethical aspects of the published material have been recently and specifically considered and this continues to be a primary aim (see in this issue' inappropriate promotion of food for infants' or 'physical abuse' items). A new aspect is the Quality of Diagnosis whether in primary, secondary or tertiary care. It is clear that a guide for spotting diagnosis errors does not exist. If we are conscious of our limitations, the IPA Newsletter is trying to contribute to the accurate diagnosis basically in primary care and for common diseases. The Global Clinical Practice section is one of the better examples in this era and how its interest leaded us to double the subjects in each issue.

The permanent sections as normal reflect the wide IPA field of action. Within the Ongoing Activities section, Climate change could be interpreted at first as far from the primary care pediatrician duties, but spread and continuous information at the office will be positive long term. IPAF continues facilitating possibilities for clinical research and help for children in the disaster zones, unfortunately its resources are scanty. The liaisons with WHO, FAO and obviously with the national societies are increasing always for the benefit of child health, these tasks have sometimes pitfalls, mostly bureaucratic, but not discouraging the IPA intentions. A few words must be dedicated to the persons whether in the EC or in other levels whose

anonymous and efficient works make possible the IPA progress, although their names are not in this issue. The News section is updating achievements of our societies but is also bringing to the surface less known problems. The Global Clinical Practice section throws new light on the diagnosis and treatment of Community- Acquired Pneumonia and particularly the brain- eventual damage from the environment. The burden of teens' alcohol consumption is assessed in Hot Points. Finally, do not miss the clever selection of the star sessions of the 28<sup>th</sup> IPA Congress, a unique opportunity to get updated in this quickly evolving pediatric care.

Below there is an inset for adequating the IPA newsletter to the costumers' needs, please dear reader do not hesitate to leave your suggestions or criticism for us. Be sure these will always be welcomed.

**Manuel Moya**  
IPA Newsletter Chief Editor

### JOIN THE IPA NEWSLETTER DISTRIBUTION LIST!

In IPA we are putting all our efforts in keeping the pediatrician up to date, not only with information related to clinical practice, but also with news and updates of the Pediatric community from all around the world. Among our tools for reaching pediatricians is the IPA newsletter.

To this end, many IPA societies, are receiving a copy of the newsletter, which, in their turn, will be redistributed to all their members. Please feel free to contact the IPA Newsletter Editorial Team ([newsletter@ipa-world.org](mailto:newsletter@ipa-world.org)), so as to make sure that your email is being added to our database in order to receive our news and updates.



## IPA Ongoing Activities

### 1. IPAF REPORT

Happy New Year! As we kick off another promising year, I would like to take a moment to reflect on the wonderful growth and progress we have made together in 2015. From the continued success we see in our small grants, to the amazing efforts for the benefit of refugee children, the International Pediatric Association Foundation (IPAF) has coordinated efforts with pediatric societies and other partners around the world to provide assistance for the physical, mental, social, health and well-being of children everywhere. We have been delighted to receive thorough reports from our Ihsan Dogramaci Research Award winner in India, Dr. Prateek Bhatia. Dr. Bhatia, an assistant professor at the Pediatric Hematology Lab for the Advanced Pediatric Centre in Chandigarh, India, will complete his good work this coming summer. He has graciously agreed to share his findings in-person in Vancouver this August regarding his research on "Establishing phenotypic and genotypic screening model to identify children with iron refractory iron deficiency anemia (IRIDA)."

It is hard to believe that the IPA 2016 Congress is just around the corner. In a few short months, members representing every facet of the global pediatric community will come together in Vancouver, Canada to cooperate and collaborate, teach and learn, and set the next chapter of our collective goals and priorities. We look forward to seeing you there!

Finally, I would take a moment to reflect on the road ahead as we strive to help children and the global pediatric community in 2016. The IPAF would not have accomplished so much without the generous support from individuals, institutions, and the IPA member societies. I kindly ask that you remember the IPAF's mission as we move into 2016. Please feel free to send us your ideas or help us find new and innovative ways

to do the best we can to help raise funds for child health.

I encourage you all to visit our website, <http://www.ipaf-world.org>. The IPAF website is a place where interested partners and individuals can learn about our efforts and contribute in helping advance the IPA's goals. We welcome financial support from member societies and pediatricians so that we can continue to fund projects that make a difference in children's lives. We also use this site as a portal to introduce our grants and provide financial disclosures to donors.

Help continue the legacy and ask your pediatric society to contribute at <http://www.ipaf-world.org/donate>.

Thank you for all you do and once again, Happy New Year!

*The International Pediatric Association Foundation, Inc. (IPAF) works with national pediatric societies to promote the physical, mental and social health of children in order to achieve the highest standards of health for newborns, children and adolescents in all countries of the world. Incorporated over 10 years ago, the IPAF is the fundraising arm of the International Pediatric Association and provides seed money for research and education projects developed in collaboration with national pediatric societies. The IPAF also provides funding during humanitarian emergencies. Dr. Errol Alden is serving as the current IPAF President.*

**Dr. Errol Alden, MD, FAAP**  
IPAF President

## 2. IPA SUPPORTS UNICEF STATEMENT “UNLESS WE ACT NOW” ABOUT THE IMPACT OF CLIMATE CHANGE ON CHILDREN

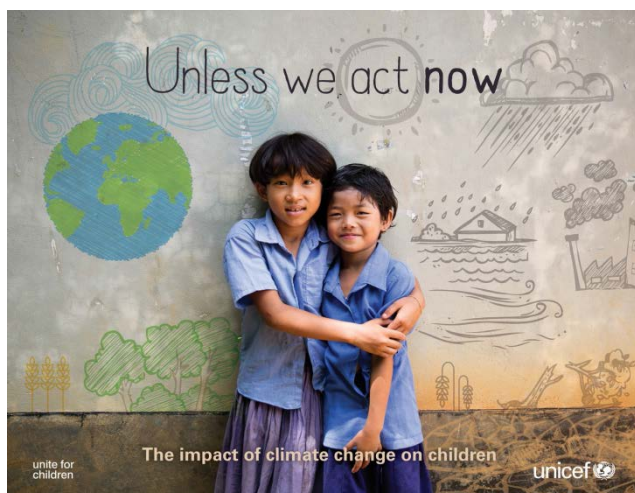
*My dear fellow pediatricians,*

*A healthy and sustainable environment for today's and tomorrow's children concerns all pediatricians. Please see the November, 2015 UNICEF Statement, "Unless We Act Now" linked here:*

[http://www.unicef.org/publications/index\\_86337.html](http://www.unicef.org/publications/index_86337.html)

*Among the dangers that environmental deterioration will bring is an extreme risk of flooding to 530 million children who live in high risk zones, droughts that will threaten the fragile availability of sufficient food and further air pollution that will accelerate the current epidemic of childhood asthma. Standing up for children and convincing political leadership of every country of the urgency for vigorous efforts providing a safe and sustainable environment is the privilege of every pediatrician.*

*Andreas Konstantopoulos MD  
President of IPA*



## A climate agenda for children

There are ten statements to be taken to safeguard our children's future. Below appear the first two of them, because they describe the concept of climate change and its eventual repercussion on pediatric ages.

**1 Cut greenhouse gas emissions so that global temperature increases are limited to a maximum of 2°C, and ideally to 1.5°C.** Failing to curb emissions will put hard-won development gains at risk. Governments must increase their emissions pledges, in line with science, to meet the scale of the climate change challenge, with high-income countries taking the lead. Cutting emissions will require prioritizing low carbon development, adopting a robust legal framework with clear rules, and expanding sustainable energy solutions. Development is not possible without energy and sustainable development is not possible without sustainable energy.

**2 Make the needs of the most vulnerable, including children, central to climate change adaptation.** Children are particularly vulnerable to climate change for many reasons, including their susceptibility to the diseases and environmental stresses that will be worsened by a shifting climate. While all people deserve protection from the effects of climate change, those who have contributed the least to climate change will suffer its effects longest. Therefore, the youngest and most disadvantaged should receive the strongest protections from its effects. This task should not be relegated only to departments or ministries of environment, but should also be handled by agencies and actors across the public, private and civil society sectors.

The remaining can be found in page 66 of the publication found in the official website of UNICEF [http://www.unicef.org/publications/index\\_86337.html](http://www.unicef.org/publications/index_86337.html)

### 3. IPA AND THE COMMISSION ON ENDING CHILDHOOD OBESITY PROGRAM (continuation)

The first article on this subject was published in the previous issue (Keenan W, Moya M. IPA NL 2015 vol 10 #3) with the subtitle 'Obesity begets obesity'. WHO established four core aims for this ending obesity action, one of these was *Intervention* in which the IPA cooperation could be framed. According to this possibility a document with the title of IPA RECOMMENDATIONS FOR OVERWEIGHT AND OBESITY PREVENTION AS PART OF PEDIATRIC MALNUTRITION IN LOW- AND MIDDLE-INCOME COUNTRIES was developed. This document included the following sections: Rationale, in which the genesis and required actions are outlined. Methods: the Z-score was used for assessing the degree of overweight (and underweight), then a table was given with an entry for age (2-18 y) and five columns with the BMI according to Z-score indicating the degree of deviation from the normal weight. This had the advantage of making the classical growth charts unnecessary and only a plasticized table in the office is enough to evaluate all attending patients. Finally the Lines of Prevention were settled in a rational and practical way. This document is presently under study for further adequacy and country application.

FAO has a program, Nutrition-Sensitive Social Protection around the World, with a different approach although sharing certain targets with the Commission. Very recently The Forum on Food Security and Nutrition (FAO, FSN forum) has held a webinar in which they signaled the importance of Rural Organizations (ROs) for improving results. IPA TAG-Nutrition participated in this webinar and established contacts to try and expand their reaching of rural populations in LMIC.

**Manuel Moya**  
IPA Newsletter Chief Editor



WHO Headquarters - Geneva



#### 4. IPA AND POST-2015 ERA OF SUSTAINABLE DEVELOPMENT GOALS (SDGs)

The recent turn of the year has signaled the end of the time of the Millennium Development Goals (MDGs) and the beginning of the Sustainable Development Goals (SDGs) which under the UN will last for another 15 year period and will deal with the five Ps: people, planet, prosperity, peace, partnership. These wide goals have a vast number of targets of which less than 15% are related to health. Target 2.2 (ending all forms of malnutrition), target 3.2 (reducing even more the achieved figures by MDGs of under 5 and neonatal mortality), target 3.3 (ending epidemic of certain infectious diseases), target 3.4 (reducing mortality from non-communicable diseases) and target 3.6 (to halve deaths from traffic accidents) have a clear relationship with pediatric care. The remaining targets are very important but they rest more on governments or international organizations.

It is clear that education is basic for target achievement as the success of MDGs on some specific goals (mortality, infectious diseases) has pointed out although not evenly in all countries. Another recent and important notion came from the Commonwealth Fund survey to strengthen primary care (<http://healthaffairs.org/blog>). If this step may be a barrier to the care of complex patients in high income countries, in LMIC this barrier becomes an insuperable wall even for elementary care. The binomial child health and primary care has always been one of the areas of most concern and dedication of IPA, therefore education for coping with the above mentioned targets will continue contributing in the appropriate extent for better health in 2030.

**Bill Keenan**  
IPA Executive Director

#### 5. IPA AND INAPPROPRIATE PROMOTION OF FOODS FOR INFANTS AND YOUNG CHILDREN

Last 17<sup>th</sup> August 2015 IPA through the TAG-Nutrition attended the WHO encounter on 'Clarification and Guidance on Inappropriate Promotion of Foods for Infants and Young Children' which took place at the Headquarters in Geneva. Our presentation was focused on the two following points. One, dealing with new inappropriate promotion techniques and the other dealing with the possibilities that IPA can offer to decrease this deceiving practice.

In the first instance it is compulsory once more to state that IPA is fully concerned with inappropriate promotion of foods at these ages and has detected the subterfuges in the following instances: 1) Lactose free formulas in case of acute diarrhea invoking a certain lactase deficiency. 2) Formulas containing long chain polyunsaturated fatty acids (mainly DHA) because the questionable improvement of neurodevelopment. 3) Formulas with low protein content claiming their proximity to breastmilk.

As regards the second point, the IPA acting aims to providing the national and regional pediatric societies (n=167) specific and concise information that can be divided into two specific documents. One, explaining that despite novel adding of nutrients to infant formulas, breastfeeding remains the suitable and advantageous way over any other one offered by industry. This will be accompanied of the related parts of the WHO 'Clarification and Guidance on Inappropriate Promotion of Foods for Infants and the FAO Second International Conference on Nutrition once they were published. The second document would be related to the ad hoc parts of the Codex Alimentarius and WHA resolutions.

**Manuel Moya**  
IPA Newsletter Chief Editor

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## News

### 1. CONSENSUS ON INTEGRATED CHILD HEALTH – FROM HOSPITAL TO COMMUNITY

Nowadays, with modern medical advances, many children survive from complex medical conditions and live with chronic illnesses extending into adulthood. It is the common goal of all healthcare modalities to provide the best quality care to these children and their families. The focus is no longer on treatment only but more and more demand have put on long term rehabilitation, service satisfaction, cost effectiveness, support to care takers and the quality of life of children in needs. The first Children's Hospital in Hong Kong will commence into service in 2018 to provide tertiary to quaternary care to children with medical complexities. In addition to the service commitment, it also takes up the tasks on training, research and integration with the community.

The Hong Kong Paediatric Society (HKPS) and the Hong Kong Paediatric Foundation (HKPF) have jointly organized the meeting themed ***“Consensus on Integrated Child Health – from Hospital to Community”*** with the American Academy of Pediatrics (AAP) at the Mira Hong Kong, on 7-8 Nov 2015 in the presence of renowned world speakers Dr. Jane FOY and Dr. Thomas KLITZNER representing AAP, Dr. Zulkifli ISMAIL, President of Asia Pacific Pediatric Association (APPA) and Professor SHEN Kun Ling, President of the Chinese Pediatric Society (CPS) to share with us on the concepts of “Medical Home” and “Integrated Care”, with the objective to bridge up the gap in child healthcare between hospital and community so as to provide child-centered, user-friendly, family-focused, seamless (among medical, social and education sectors), favourable ecology (family, school, playground and community) as well as comprehensive healthcare to the children with medical complexities we serve.

The meeting was well attended by more than 300 local delegates with wide representation from healthcare professionals including paediatricians, nurses and allied health professionals and service providers, policy-makers, politicians, educators, community partners, parent groups and all those interested in child health. Through the two-days meeting, we have assembled, discussed, shared and exchanged experiences and knowledge converged onto good consensus on integrated and coordinated quality care on child health from hospital to community.

“Hospital” here not specifically limits to the Hong Kong Children's Hospital but cited in a more broad sense to include ALL hospital settings with paediatric departments in the public system (under the Hospital Authority of Hong Kong) as well as those under the private sector. Interfacing between hospital and community care, between the public and private is the gold standard for child healthcare in Hong Kong and should be safeguarded at all times. The integration should be seamless, effective and bi-directional to allow patients and families smoothly transit from different phases of the life cycle into another without interruption, duplication and omission in the growth and development of our beloved children. Case managers and community nursing care are essential to ensure attainment of these targets.

Patient health passport (individualized electronic medical record) summarizing all the medical conditions, treatments and medications should go with the patient wherever he/she goes.

Both local and international experts and delegates concluded unanimously on the urgent need of formulating a comprehensive Child Health Policy to realize Integrated Child Health and establishing a Children's Commission under a powerful Children's Commissioner so as to supervise, implement, evaluate, and monitor the progress currently and for surveillance in the future addressing their physical, mental, social, behavioural and spiritual well-beings proactively and providing with a fertile and safe environment for them





to grow and develop to reach their highest potentials in life.

Children make up 20% of our population but represent 100% of our future! Integrated Child Health is essential for their attainment of highest potential in life. We need a joint powerful voice for our Children to achieve the IPA (International Pediatric Association) target objective of safeguarding “*Child Survival, Child Health and Child Development*”; “*Healthy Children for Healthy World*”; and “*One Child , One Dream*”. This should be common goals for all healthcare professionals to strive for the health and advocacy of the children we care!

**Lilian Wong**  
President, Hong Kong Pediatric Society

## 2. GLOBAL NUTRITION REPORT 2015 (GNR)

The GRN is a valuable and extensive (>250 pages) document which analyzed all forms of malnutrition in all countries and gives a firm ‘Call to Action’ for each one of its targets. It has been produced by an independent expert group of more than 70 authors who have also evaluated the progress the world is making on reducing malnutrition. From the Global Dashboard for 8 nutrition targets It can be seen how half of them are pediatric and deal with stunting, wasting, overweight and full breastfeeding. The remaining four are related to adult overweight and obesity plus anemia in women. (<http://globalnutritionreport.org>)

*‘As we move into the post- 2015 era of the Sustainable Development Goals (SDGs), the world faces many seemingly intractable problems. Malnutrition should not be one of them. Countries that are determined to make rapid advances in malnutrition reduction can do so, and the incentives to improve nutrition are strong. Good nutrition provides a vital foundation for human development, central to meeting our full potential. When nutrition status improves, it leads to a host of positive outcomes for individuals and families. Many more children will live to see their fifth birthday, their growth will be less disrupted, and they will gain in height and weight. They will learn more in school because their brain function is not impaired. As a result of this positive early environment, as adults they will have better jobs and get ill less often. Older adults will age more healthily and live longer’.*

The role of the pediatrician or any other primary care provider as direct contact with the child at risk or already affected could contribute to the success of actions in the general guidelines.



The Consensus on Integrated Child Health was officiated by international guests (from left to right), Prof. SHEN Kun Ling (President of Chinese Pediatric Society), Dr. Zulkifi ISMAIL (President of Asia Pacific Pediatric Association), Dr. Jane FOY (Board Director of American Academy of Pediatrics) and Dr. Thomas Klitzner (Founder and Executive Director of the Pediatric Medical Home Program at UCLA) accompanied by Dr. Lilian WONG (President of the Hong Kong Paediatric Society), Dr. CHAN Chok Wan (Board Chairman of the Hong Kong Paediatric Foundation).



### 3. CHILD PHYSICAL ABUSE. WHEN TO SUSPECT IT?

Child physical abuse is the easiest form of maltreatment to be diagnosed, nevertheless a great proportion of such situations are still unrecognized by different social welfare services and even by primary care providers, especially when they affect children younger than four years of age. Child abuse is linked to severe consequences and is in all likelihood on the increase. The American Academy of Pediatrics, through its Committee on Child Abuse and Neglect has recently published an article<sup>1</sup> aimed at improving the identification of this condition, with the object of reporting instances to the existing community agencies and establishing immediate and long-term treatments.

According to these guidelines, one may suspect child abuse when, on physical examination, any of the following appear:

1. Any injury to an infant who is not yet mobile.
2. Injuries in atypical areas (e.g. torso, ears).
3. Various injuries at different healing stages.
4. Trauma to more than one organ system.
5. Symptoms that might indicate head trauma, such as unexplained vomiting, lethargy, irritability, apnea or seizures.

When abuse is suspected, skeletal survey and brain imaging may help identify hidden injuries. Examination of siblings may also uncover further injuries. Another suspicion factor is the child with disabilities. If the suspicion is confirmed, reporting is mandatory.

After certain adult on childhood experiences reports it is clear that the rate of child abuse, is unfortunately above the normally accepted thresholds, then pediatricians have the opportunity of contributing to a better health by discovering at an early stage this situation

<sup>1</sup>Christian CW. The evaluation of Suspected Child Abuse. Pediatrics 2015; 135: e1337-e1343

### 4. IPA COSPONSORS WORKSHOP ON PSYCHOLOGICAL SUPPORT FOR CHILDREN IN NEPAL

In partnership with the Nepal Paediatric Society, Case Western University, Khon Kaen University, the Pediatric Society of Thailand and Health Frontiers the IPA Humanitarian Disasters Technical Advisory Group held 5 days of intensive learning concerning the emotional needs of children affected by disasters. On April 25, 2015 a magnitude of 7.9 Richter earth quake hit Nepal just 50 miles from the capital Kathmandu. The natural disaster was detected as far as Delhi in India and caused untold devastation, killing over 9,000 people and injuring a further 17,000 including many children. Seventeen days later, the second earthquake struck, causing further fear to the already shaken community. As a result it is estimated that over 8 million people throughout Nepal have been affected, from whom 3.2 million are children.

In emergency and humanitarian situation, it is evident that children are most vulnerable, in terms of psychosocial and general health. The untoward circumstances often than not affect a child's sense of security and therefore their ability to recover. Child Friendly Spaces have been provided for by many organizations where they act as a place for children to play, access support and build on their natural ability to bounce back. The locations and opportunity also give parents and other caretakers much needed time to cope with the situation.

More than 8000 schools and over 26,000 classrooms were damaged during the quake. Three months on, UNICEF Nepal stated that over 200 children are without a parent or caregiver, and more than 600 have lost one or both of their parents to the quakes. Organizations such as UNICEF have been able to help over 100,000 children to continue their education in temporary learning centers, helping to intercept over 500 children and women from being trafficked or illegally moved out of the country, and providing nearly



30,000 children with psychosocial support to help them recover from their traumatic experiences. Ongoing unchecked adoption policy and children being deliberately separated from parents led to various agencies wishing to raise public awareness of such concerns.

- Chanyut Suphakunpinyo, Assistant Professor of Pediatrics, Department of Pediatrics, Faculty of Medicine, Khon Kaen University, Thailand.
- Pulsuk Siripul, PhD., Associate Professor, Faculty of Nursing, Khon Kaen University, Thailand. and
- Mahipathorn Chinnapha, Lecturer, Department of Pediatrics, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Thailand.



**The IPA wishes to give special recognition to Drs. Hemsagar and Olness for their leadership in initiation and organization of these workshops.**

**Bill Keenan**  
 IPA Executive Director

The six days of workshops were held in Biratnagar and Katmandu June 29 through July 4, 2015

**Faculty Included:**

- Hemsagar Rimal, MD., Associate Professor of Pediatrics, Department of Behavioral & Developmental Pediatrics, Noble Medical College, Biratnagar, Nepal.
- Marisa Herran, MD., Assistant Professor of Pediatrics, Department of Pediatrics, Metro Health Medical Center, Case Western Reserve University School of Medicine, USA.
- Saleh Alsalehi, MD., Consultant, Department of Behavioral & Developmental Pediatrics, King Fahad Medical city, Riyadh, Kingdom of Saudi Arabia.
- Ayesha Cheema-Hasan, Fellow in Developmental Pediatrics, Division of Developmental and Behavioral Pediatrics, Rhode Island Hospital, Brown University, USA
- Srivieng Pairojkul, MD., Associate Professor of Pediatrics, Karunruk Palliative Care Center, Faculty of Medicine, Khon Kaen University, Thailand.



## Global Clinical Practice

### 1. COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN – WHAT TO DO AND WHAT NOT TO DO

**J. Rafael Bretón-Martínez, Pilar Codoñer-Franch**

Pneumonia is one of the worldwide leading causes of postneonatal deaths causing 16% of deaths in children younger than 5 years in 2015 (1). The case fatality in untreated children with pneumonia is high, sometimes reaching 20% and death can occur as early as 3 days after illness onset. Although *Haemophilus influenzae* type b and pneumococcal vaccines have reduced deaths by 18% and 26%, community-acquired pneumonia (CAP) is a common cause of morbidity among children in developed countries and accounts for an incidence of 10-40 cases per 1000 children in the first 5 years of life. Here we present recommendations for diagnosis and management of CAP (2,3) in immunocompetent children aged > 3 months without chronic conditions or underlying lung disease.

**Etiology:** Respiratory viruses (rinovirus, respiratory syncytial virus (RSV), influenza, parainfluenza, adenovirus, etc.) play the major role alone or as co-pathogens with bacteria. The highest incidence of viral CAP is observed during the first 2 years of life when it may be as high as 80%. Concerning bacteria, *H. influenzae* group b has significantly decreased in those countries where conjugate vaccines are widely used. *Streptococcus pneumoniae* is the most common bacterial agent in children aged < 5 years. The introduction of PCV7/PCV13 vaccines has reduced hospital visits and hospitalization rates of alveolar CAP (4). Assessing immunization status is imperative to guide decision-making.

**Clinical features:** Bacterial pneumonia should be considered in children when there is persistent or repetitive fever > 38,5°C together with raised

respiratory rate and chest recession. History of fever, cough, tachypnea, crackles, retractions, grunting and decreased breath sounds has been associated with a focal infiltrate on chest radiography. Moreover, children with a history of chest pain, focal rales on examination, fever  $\geq 38^{\circ}\text{C}$  or hypoxia are at a significantly increased risk for radiographic pneumonia. Conversely, children with wheezing on examination are significantly less likely to be diagnosed with radiographic pneumonia. The rate of pneumonia is lower in the absence of hypoxia and fever and without focal auscultatory findings (5).

Pneumonia should be investigated in all children with fever without source and increased white blood cell count  $> 20.000/\text{mm}^3$ .

**Pulse-Oxymetry:** Hypoxaemia is a good marker of disease severity and is often associated with adverse outcome. Suspected hypoxaemia should be evaluated by pulse-oximetry (6) because management of hypoxaemia (oxygen saturation  $\leq 92\%$ ) with oxygen is associated with improved quality of care and reduced mortality.

**Chest Radiography:** Chest radiography is generally not needed to confirm CAP in patients well enough to be treated in the outpatient setting.

Chests radiographs should be obtained in all hospitalized children, in patients with suspected or documented hypoxemia or significant respiratory distress, and in those with failed antibiotic therapy to verify the presence or absence of complications of pneumonia including paraneumonic effusions. A lateral x-ray should not be performed routinely.

Repeated chest radiographs are not routinely required in children who are recovering uneventfully but should be obtained in children who fail to demonstrate clinical improvement or have progressive symptoms within 48-72 hours after initiation of antibiotic therapy, and in those with round pneumonia or collapse.



Repeated chest radiographs 4-6 weeks after the diagnosis of CAP should be obtained in patients with recurrent pneumonia involving the same lobe with a suspicion of an anatomic anomaly, chest mass or foreign body aspiration.

**Complete Blood Cell Count:** It is not necessary in children managed in the outpatient setting but should be obtained in children requiring hospitalization.

**Acute-Phase Reactants:** Erythrocyte sedimentation rate, C-reactive protein or serum procalcitonin need not to be routinely measured in children managed as outpatients. They cannot be used as the sole determinant to distinguish between viral and bacterial causes of CAP but may provide useful information in children requiring hospitalization for clinical management.

**Blood cultures:** Blood cultures should not be routinely in patients managed in the outpatient setting but should be obtained in children requiring hospitalization and those who do not demonstrate clinical improvement or with clinical deterioration after initiation of antibiotic therapy.

**Respiratory Samples:**

- **Testing for Viral Pathogens:** Rapid diagnosis of influenza virus and other respiratory viruses is recommended in the evaluation of children with CAP. Influenza testing as seasonally appropriate is recommended when symptoms are compatible with influenza and results may influence the decision to treat with antiviral medication. Antibacterial therapy is not necessary for children with a positive test for influenza virus or RSV in the absence of clinical, laboratory or radiographic findings that suggest bacterial coinfection.
- **Bacteriological culture of respiratory tract samples:** should not be considered routinely in those children with milder disease or those treated in the community. In hospitalized children sputum

samples for Gram stain and culture may be obtained if the patient is able (> 5 years). Tracheal aspirates should be obtained for microbiologic work at the time of initial endotracheal tube placement in children requiring mechanical ventilation.

**Testing for Atypical Bacteria:** Children with signs and symptoms suspicious for *Mycoplasma pneumoniae* should be tested to help guide antibiotic selection. However readily available diagnostic tests for *Chlamydia pneumoniae* do not exist. Acute and convalescent serology can be tested.

**Urinary antigen detection tests:** They are not recommended for the diagnosis of pneumococcal pneumonia in children because false-positive tests are common.

**Hospitalization:** The most important decision in the management of CAP is whether to treat the child in the community or refer and admit for hospital-based care. Indications of hospitalization are listed in Table 1.

**Intensive Care Unit:** Children should be admitted to an Intensive Care Unit when they require use of noninvasive or invasive ventilation because of impending respiratory failure (pulse oximetry measurement < 92% on inspired oxygen of  $\geq 50\%$  or hypercarbia) or they need pharmacologic support for maintaining blood pressure or perfusion.

**General management:** Information on managing fever, preventing dehydration and identifying any deterioration should be provided to families of children who are well enough to be cared for at home.

**Anti-Infective Treatment:**

**Outpatients:** Preschoolers who have received conjugate pneumococcal vaccination with mild CAP who can be closely followed up and from whom all of the available epidemiological, clinical, laboratory and radiological data clearly suggest a viral infection should be given symptomatic therapy alone. However, a close



follow-up should be assured. They should receive antibiotics if bacterial and viral pneumonia cannot be reliably distinguished from each other.

Amoxicillin should be used as first-line therapy for previously healthy, appropriately immunized patients with mild to moderate CAP suspected to be of bacterial origin. Amoxicillin provides appropriate coverage for *Streptococcus pneumoniae*, the most prominent bacterial pathogen. In countries with a high prevalence of pneumococcal penicillin nonsusceptibility, higher doses of betalactamic antibiotics must be administered, i.e. amoxicillin should be given at a doses of 80-90 mg/kg/d.

In children < 5 years old not fully immunized against *H. influenzae* type b and well-appearing with mild CAP the first-line choice may be co-amoxiclav.

Macrolide antibiotics should be prescribed if it is suspected atypical pathogen (may be used alone if high suspicion of single atypical pathogen). Consider adding macrolide to amoxicillin if the patient's clinical picture is difficult to distinguish between atypical pneumonia and routine CAP.

Influenza antiviral therapy should be administered as soon as possible to children with moderate to severe CAP consistent with influenza virus infection, particularly for those with clinically worsening disease or in high-risk group.

In pneumonia associated with influenza, co-amoxiclav is recommended given the known association between influenza and *Staphylococcus aureus* superinfection. Consider clindamycin if the patient is at risk of MRSA (methicillin-resistant *S. aureus*).

**Inpatients:** Intravenous antibiotics should be used in the treatment of pneumonia in children when the child is unable to tolerate oral fluid or absorb oral antibiotics or presents with signs of septicaemia or complicated pneumonia.

Recommended intravenous antibiotics for severe pneumonia include penicillin G, amoxicillin, ampicillin, co-amoxiclav, cefuroxime and cefotaxime or ceftriaxone.

Ampicillin or penicillin G should be administered to the fully immunized infant or school aged admitted to a hospital with CAP when local epidemiologic data document lack of substantial high-level penicillin resistance for invasive *S. pneumoniae*. Empiric therapy with a third-generation parenteral cephalosporin (cefotaxime or ceftriaxone) should be prescribed for hospitalized children who are not fully immunized, in regions where local epidemiology of invasive pneumococcal strains documents high-level penicillin resistance, or for infants and children with life-threatening infection, including those with empyema.

Empiric combination therapy with a macrolide (oral or parenteral), in addition to a betalactam antibiotic, should be prescribed for the hospitalized child for whom *M. pneumoniae* and *C. pneumoniae* are significant considerations or in very severe disease.

Oxacillin, vancomycin or clindamycin (based on local susceptibility data) should be added to betalactam therapy if clinical (critically ill), laboratory or imaging characteristics are consistent with infection caused by *S. aureus*.

Quinolones (as levofloxacin) should only be used in very selected cases if there are no other effective alternatives or in case of children with immunoglobulin E-mediated allergy to betalactams.

In a patient who is receiving intravenous antibiotic, oral treatment should be considered if there is clear evidence of improvement and oral drug is tolerated.

**Duration of Antimicrobial treatment:** Treatment courses of 10 days have been studied, although shorter courses may be just as effective for non-severe CAP managed on an outpatient basis. Around 7 days is proposed for mild-to-moderate CAP. A longer



treatment (i.e.  $\geq 14$  days) should be used in cases of severe and/or complicated CAP.

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**TABLE 1. Criteria for Hospitalization of Children with CAP**

- Infants less than 3-6 months of age with suspected bacterial CAP
- Respiratory distress
  - Hypoxemia (SpO<sub>2</sub><90-93% in room air), cyanosis
  - Significant tachypnea (>70 breaths/min in infants; > 50 breaths/min in older children)
  - Breathing difficulty
  - Retractions
  - Grunting
  - Nasal flaring
  - Intermittent apnoea
- Capillary refill time > 2 seconds
- Dehydration
- Vomits/not feeding
- Altered mental status
- Concern about careful observation at home
- Suspicion/confirmation of community-acquired methicillin-resistant *S. aureus* (CA-MRSA), other virulent cause of CAP
- Pre-existing comorbidities
  - Chronic pulmonary conditions
  - Immunological, hematological, cardiac o neurological disorders



## 2. WHAT PEDIATRICIANS NEED TO KNOW ABOUT “BRAIN ROBBERS” AND HEALTHY BRAIN DEVELOPMENT

**Ruth A. Etzel, MD, PhD**

Much of a child’s ability to learn depends on healthy brain development. To ensure optimal brain development, the growing brain must be protected from toxic contaminants that interfere with its optimal development. These have been called “brain robbers” because they rob the brain of its fullest potential. Recent studies provide information that helps pediatricians help parents to take steps to try to avoid these exposures during pregnancy and the early years of life to protect against “brain robbers”.

Children often are exposed to these “IQ robbers” in their homes – the very homes where they should be the safest. During the first few years of life, many children spend 80-90% of their time indoors. The home can be contaminated with a variety of pollutants, many of which we cannot see or smell. A child is more vulnerable to the effects of these contaminants because his brain and nervous system is still growing. On a kilogram per kilogram basis, the child breathes more air, drinks more water, and eats more food than an adult. If the air, water, or food is contaminated, the child receives a higher exposure to the contaminants. A child’s brain is developing most rapidly during pregnancy and the early years of life. An estimated 86 billion neurons are formed during the first 5 months of gestation. At times during brain development, some 250,000 neurons are added every minute. Exposure to toxic substances interferes with neurons’ ability to function at maximal capacity. This can result in a lower intelligence quotient for children who are exposed to toxic substances than for those who are unexposed. Knowledge about these “brain robbers” is not common. This article will describe 6 contaminants commonly found in a child’s environment; exposure to these toxic substances during pregnancy and early life

can result in IQ deficits and developmental and learning disorders.

The 6 contaminants are listed below:

### Lead

Lead is a well known brain poison. During brain development, even small amounts of lead can interfere with the normal process. Children can be exposed to lead when lead paint was used to paint the home. Through their normal exploratory hand-to mouth behaviors, they may ingest paint chips or lead-contaminated dust. Although many countries have banned the use of lead paint, it is still used in some parts of the world. Children also may be exposed to lead paint on toys (including toy necklaces, spinning top toys, and tin pail toys) and some other consumer goods. To assess whether a child has been exposed to lead, a blood lead test should be done around the time of the first birthday. There is a relationship between blood lead concentration and decreased scores on reading and arithmetic tests in children 6 to 16 years old, including among those whose blood lead concentrations by then are lower than 5 µg/dL. It is important to reduce all sources of lead in a child’s environment.

### Secondhand smoke exposure

Cigarette smoke contains some 4000 chemicals, many of which can harm the developing brain. Secondhand smoke is the smoke that comes from the burning end of the cigarette, which contaminates the room or car where the smoking occurs. If anyone smokes inside the home, pregnant women and children breathe the toxic chemicals in the smoke. These toxic compounds remain in the room or car long after the source of smoke is extinguished, so exposure continues to occur after a smoker has left. Some of these compounds interfere with normal brain development. Children who are exposed to secondhand smoke have been documented to have lower IQ than those without secondhand smoke exposure. It is important to eliminate exposures to secondhand smoke to prevent





IQ loss and other neurodevelopmental problems among children.

### Molds

Molds can grow in water-damaged home environments, and until recently they were considered to be a household nuisance, but hardly a health hazard. We now understand that infants and young children who live in moldy home environments have a higher risk of respiratory illnesses and some neurological problems. Many molds produce mycotoxins, toxic compounds that can damage the developing brain and the nervous system. A study in Poland documented that children living in homes with visible patches of mold growth on internal walls had lower IQ than those living in homes without molds, even after other factors causing low IQ were considered. Because molds present a health hazard and can reduce IQ, pregnant women and children should not live in moldy homes.

### Mercury

Mercury is another brain poison. Children are exposed to mercury primarily from eating fish that are contaminated with mercury or from the mercury in silver dental fillings. Mercury exposure is toxic to the developing nervous system. Children with higher mercury levels have lower IQs than children with lower mercury levels. Because large, predatory fish (such as shark, swordfish, tilefish and king mackerel) have the highest levels of mercury, to reduce mercury exposure it is best to avoid eating them or feeding them to children. Consumption of white (albacore) tuna also should be limited.

### Organophosphate Pesticides

Organophosphate pesticides are designed to poison the nervous system of pests such as insects, but they can also harm the nervous system of other animals (including humans) who are unintentionally exposed. Use of these pesticides is common inside homes, so many pregnant women and children have exposure to them. Prenatal exposure to organophosphate pesticides has been linked to IQ decrements in 7 year

old children. There does not appear to be an association with postnatal exposure to pesticides. The implications of these findings are that pregnant women should avoid pesticide use in their homes because of the toxic effects on the developing brain of the fetus.

### Outdoor air pollution

Outdoor air pollution, largely from fossil fuel burning, also contains substances that are neurotoxic, such as polycyclic aromatic hydrocarbons. When windows are open or air conditioners are being used, outdoor air pollution can come inside the home. Studies in New York City found a significant inverse association between child IQ and prenatal exposure to airborne polycyclic aromatic hydrocarbons. Because automobile exhaust is a major source of outdoor air pollution, using a bicycle or taking mass transit (train or bus) can help to reduce the amount of pollution in the outdoor air.

Although all 6 of these “brain robbers” have been linked to lower IQ in children, there is much that parents can do to avoid them. And their adverse effects on IQ can be counteracted by breastfeeding, long known to increase a child’s IQ. Breastfeeding is, therefore, one of the most important steps that a mother can take to enhance the brain development of her infant. There are several additional steps that that pediatricians can advise parents can take to during pregnancy and the early years to protect their children’s intelligence. These steps can help to maximize children’s cognitive abilities:

1. Breastfeed infants for at least the first 6 months of life.
2. Test the child’s blood for lead.
3. Avoid paints containing lead, which are still sold in many countries and used on toys and other items that children may put in their mouths.
4. Ensure that the child’s home and car are smoke-free. Don’t smoke cigarettes and don’t allow anyone to smoke in a house or a car in which children live, ride or play.



5. Quickly clean up water damage from roof leaks or plumbing leaks so that mold does not grow indoors.
6. Avoid eating large, predatory fish (including shark, swordfish, tilefish and king mackerel).
7. Limit consumption of white (albacore) tuna.
8. Do not use pesticides indoors.
9. Take mass transit rather than driving when possible; this helps to reduce outdoor air pollution.

If you would like to know more, please join us on August 17 at the International Congress of Pediatrics for a Pre Congress Workshop on Child Health and the Environment. If you are interested in attending, please visit: <http://www.ipa2016.com/>

## Hot Points in Pediatric Care & Prevention

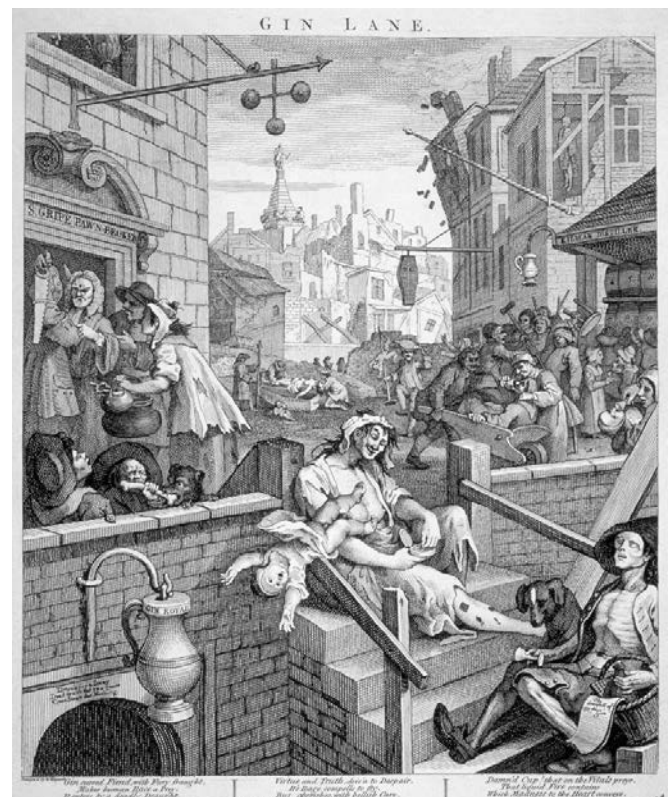
### ALCOHOL RISKS IN PEDIATRIC AGES

In general customary drinking alcohol is a complex problem frequently understated or hidden by the subject or the family but for its present or future consequences cannot be overlooked in pediatric care in many areas of the world. Recently the prestigious Morbidity and Mortality Weekly Report (MMWR) dedicate an Announcement for the Fetal Alcohol Spectrum Disorders Day<sup>(1)</sup> with a precise description of the problem and important links for coping with. Furthermore the CDC in its Press Release (25<sup>th</sup> Sep 2015) reveals the important clinical burden that implies alcohol drinking by pregnant women (or adolescents). Ten percent of pregnant women in US report drinking alcohol in the past 30 days and one third report binge drinking. From the pediatric point of view this implies an enormous cost in terms of disabilities and resource expenses.

The Fetal Alcohol Spectrum Disorders or FASD<sup>(2)</sup> has been well known in pediatric practice because of its facial dysmorphia, growth deficits and central nervous abnormalities, but the important point to be considered now is that the spectrum goes from the full syndrome to subtle intellectual disabilities that will last for the whole life. More important is the fact that this is the most common preventable cause of this type of impairment<sup>(3)</sup>. A population especially at risk is the adolescent girls<sup>(4)</sup> because they seek the company of older mature youth and softer parent supervision as the study of near 1000 Swedish girls during 4 consecutive years reveals.

If prevention is our preferred course of action, then to screen teens while at office visit for any matter should be obligatory. There is a varied panorama of questionnaires practically designed for adults<sup>(5)</sup>. They

can be used for youths especially the ones of lesser time consuming: CAGE questionnaire (1 minute), AUDIT-C (4 minutes). Table 1 shows the CAGE Q<sup>(6)</sup>, which is a near acronym on four questions, if two or more responses are positive the risk of excessive drinking can be suspected, if fourth question is positive then it may indicate alcoholism. This simple tool makes sense in view of the frequency of alcohol intake and even binge drinking occur in high income countries, where 50% of the 12-15 year population have had more than a sip of alcohol<sup>(7)</sup>.



**The Gin Lane, engraving by William Hogarth ( 1697-1764). The risks of alcoholism are described with a satirical flair in this hypothetical street of the 1781 London.**

Once alcohol intake is ascertained the first intervention is to state that the young's drinking exceeds the



recommended limits and could lead to alcohol related problems. Recommend to minimize or stop drinking. If there are symptoms of alcohol abuse, dependence or abstinence the referral to a specialist is the advisable issue. An extended and updated report on this worrying problem can be found in the CDC Step-by-Step document<sup>(8)</sup>.

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**TABLE 1 - CAGE four items questionnaire (ref 6)**

1. Have you ever felt you need to **C**ut down on your drinking?
2. Have people **A**nnoyed you by criticizing your drinking?
3. Have you ever felt **G**uilty about drinking?
4. Have you ever felt you need a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?

**Manuel Moya**  
IPA Newsletter Chief Editor

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## 28<sup>th</sup> International Pediatric Association Congress

The IPA 2016 Congress is only seven months away. I hope that many of you have submitted abstracts and are already registered. If you haven't registered for the August 17-22, 2016 Congress, you can do so at [www.ipa2016.com](http://www.ipa2016.com). There is also information on the detailed program, accommodations, travel and visas for those for whom this is required.



Please plan on attending the opening ceremonies August 17, 2016 where Mr. Anthony Lake (Executive Director, UNICEF) will be the keynote speaker. This will be followed by a reception and there will be further "official" opportunity for collegiality at the IPA dinner on August 20, 2016. Each day will start with a morning (0730 to 0830) "Meet the Expert" Sessions (24). There will be two plenary and two concurrent sessions each day.

Under the leadership of Dr. Jean-Yves Frappier, the Scientific Committee has put together an exciting program. Although details are available on the website, I will highlight the following plenary sessions:

- Child Health – Global Trends and Strategies

- Adolescent Health – Now and In the Future
- Adverse Events, Toxic Stress on the Brain
- Best Buy in Non-Communicable Disease (NCD) Intervention
- Environment Shapes Future Health
- New Frontiers in Media and Technologies
- Equity in Health – Reaching the Unreached
- Mental Health: New Challenges
- The Most Influential Articles that May Change your Practice

We also have concurrent sessions (number) in the following four streams and platform presentations of selected abstracts (9 sessions):

- Prevention, Promotion and Public Health (17)
- Technology and Health Care (6)
- Innovations in State-of-the-Art in Pediatric Care (20)
- Global Health and Health Care Systems (11)

In addition to abstracts presented in concurrent sessions, there will be organized poster symposia at noon each day (other electronic posters including most of those submitted will be available throughout the meeting). These will be in the exhibit area where you may see what is new among the products of the various companies and organizations helping support the IPA 2016 Congress. We will offer financial support to a few who submit high quality abstracts.





Of special note, is the broad array of pre-conference workshops including: Acute Care of at-Risk Newborns (English and Spanish), Essential Care for Every Baby/Essential Care for Small Babies, Non-Communicable Disease Advocacy Workshop, Global Child Health Training Symposium, Accurate Evaluation of Over/Under Weight and Principles of Management, Early Childhood Development Workshop, Helping Children in Disaster Time, Medicines in Children – What You Need to Know, Workshop in the Best Interest of the Child: Improving Pediatric Quality in Low Resource Settings, Enhancing Emergency, Intensive and Critical Care in Low and Middle Income Countries, and a workshop on Early Childhood Development. These will be worth the separate registration when required.

Vancouver is a destination that few will ever forget. Combining the sea and the mountains with a vibrant community, Vancouver exemplifies the Community, Diversity and Vitality which are the themes for the IPA 2016 Congress. There is something for everyone during the scientific meetings and excellent dining, arts and sports during the Congress as well as tourism opportunities before and after the Congress. Come with your colleagues and bring a trainee! Bring your friends! Bring your family!

**Doug McMillan**  
IPA 2016 Congress President

## August 17 - 22, 2016

Community, Diversity, Vitality



### 28th International Congress of Pediatrics

17-22 August 2016, Vancouver, Canada



International pediatric association  
association internationale de pédiatrie  
asociación internacional de pediatría



Canadian Paediatric Society

[www.IPA2016.com](http://www.IPA2016.com)



## Calendar of Events

### 8<sup>th</sup> International Pediatric Simulation Symposia and Workshops (IPSSW2016)

9-11 May 2016  
Glasgow, Scotland  
<http://ipssglobal.org/ipssw2016/>

### 34<sup>th</sup> Annual Meeting of the European Society for Pediatric Infectious Diseases (ESPID)

May 10-14, 2016  
Brighton – United Kingdom  
<http://espid2016.kenes.com/>

### Annual International Conference of the Association of Psychology and Psychiatry for Adults and Children (A.P.P.A.C.)

May 17-20, 2016  
Athens – Greece  
[www.appac.gr](http://www.appac.gr)

### The 2nd International Neonatology Association Conference (INAC 2016)

July 15-17, 2016  
Vienna - Austria  
[www.worldneonatology.com](http://www.worldneonatology.com)

### 28<sup>th</sup> International Pediatric Association Congress (IPA 2016)

August 17-22, 2016  
Vancouver – Canada  
[www.ipa2016.com](http://www.ipa2016.com)

### 17<sup>th</sup> Congress of the International Pediatric Nephrology Association (IPNA)

September 20-24, 2016  
Uguaçu – Brazil  
<http://www.ipna2016.com/>

### 8<sup>th</sup> Asian Congress of Pediatric Infectious Diseases (ACPID)

November 7-10, 2016  
Bangkok – Thailand  
<http://www.acpid2016.com/>

### The 12<sup>th</sup> Asian Society for Pediatric Research (ASPR) and Faculty of Medicine Ramathibodi Hospital Joint Meeting 2016

November 9-11, 2016  
Bangkok, Thailand  
<http://www.aspr2016.com>

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