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# Delhi Pediatrics E-Journal

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*Indian Academy of Pediatrics Delhi State Branch*

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*President, IAP Delhi*

*Dr Manish Gupta*
*Secretary, IAP Delhi*

*Dr Pankaj Garg*
*Editor, eBulletin*
*Treasurer, IAP Delhi*

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# CIAP President's Pen

## *Dr Piyush Gupta*

*President*
*Central IAP*

*Greetings from* **Indian Academy of Pediatrics!**

*Wishing you all a Very Happy and Healthy New Year 2021.*

*My heartiest congratulations to IAP Delhi Team 2021 on the launch of*

***Delhi Pediatrics E Journal**. It is a huge task to get the journal on a monthly basis and I complement the DELHI IAP team to take this plunge. It is not just going to be a source of academics activities and scientific updates but also social, cultural, sports and spiritual activities of IAP Delhi. It will also serve as a source of bonding between all the members.*

*My best wishes to the Editorial team and convey my best wishes for this venture to attain greater heights in the times to come.*

*Let's all pledge this year to work together for health and welfare of all children and our society.*

*Thanks*

*Jai IAP, Jai Hind*

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# CIAP Vice President's Pen


## *Prof. Sangeeta Yadav*

*Vice President IAP North Zone 2021*
*Jt Secretary Liaison 2018-19*
*Director Professor, Dept. of Pediatrics*
*Maulana Azad Medical College & Associates Hospitals*
*Ex Head Dept of Pediatrics*
*Faculty of Medical Sciences, University of Delhi*


***Dear Colleagues,***

***Warm New Year Greetings!***

***It gives me immense pleasure to pen down this message for the E bulletin of IAP Delhi 2021.***

*First of all, Congratulations to the new team IAP Delhi 2021 under the able leadership of Dr Lalit Mendiratta President, Dr Anil Vaishnavi Vice President, Dr Manish Gupta Secretary and Dr Pankaj Garg Secretary Elect with their excellent team of illustrious OB and EB Members of IAP Delhi and City branches.*

*The theme set up for this year is* ***"Reach the Unreached Work for All".***

*I am very happy to know that Dr Pankaj Garg, Secretary Elect and the Editor of Delhi Pediatrics has taken the initiative for the E bulletin for the year 2021. I am sure that Dr Pankaj Garg shall be giving academic updates for better delivery of medical education, patient care and the health care at large through this venture and benefitting the august members.*

*Further, I heartily Congratulate team IAP Delhi 2020 for winning the IAP Best Branch Award under the leadership of Dr R K Nabh, Dr Smita Mishra, Dr Manish Gupta and the entire EB team of Delhi state for the significant achievements of 2020 made during their illustrious tenure. One is thankful for the tremendous support from Central IAP Dr Bakul Parekh President, Dr Piyush Gupta President Elect, Dr A S Vasudev Vice President North Zone 2020, Dr Basavaraja Secretary General, Dr Harish Pemde Jt Secretary Liaison and Dr Devendra Mishra Editor in Chief Indian Pediatrics throughout the year.*

*It is heartening to see that the Legacy of IAP Delhi is working in leap and bounds keeping the flagship and bench mark of IAP Delhi very high.*

*I personally thank you all for the immense support and cooperation.*

*My best wishes for the inaugural issue and a great year ahead.*

*All stay healthy and safe.*

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# IAP Delhi President's Pen


## *Dr. Lalit Mendiratta*

*President*
*IAP Delhi*


***Greetings for a Healthy and a Healthy new year 2021 to everyone.***

*This is the year of hope yet the challenges from corona pandemic are not over but we have to move forward all together as corona warriors and serve the best for our children and the community as a whole.*

*This gives an immense pleasure to announce you that our team of IAP Delhi 2021 is launching* ***Delhi Paediatrics E Journal*** *on monthly basis after a gap of 4 years and our First Edition of this year will be launched in January end. Our dear Treasurer cum Secretary Elect* ***Dr. Pankaj Garg is assigned the job of Chief Editor*** *and will be assisted by editorial team along him.*

*I offer my best wishes to the whole editorial team. This Journal will serve not only as a source of latest scientific updates on Paediatrics but also stimulate all our Paediatrics fraternity to come forward and share their clinical experiences in the form of case reports, articles and valuable updates.The inclusion of sharing our day to day sports / musical / cultural activities will also promote and stimulate great enthusiasm among us.*

*A step for uniting and bonding has been initiated by us this year by launching DelhiPaediatrics and I sincerely wish that with coming times it progresses to a new height with added dimensions and becomes a proud icon of IAP Delhi.*

*All the Best*

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# IAP Delhi Vice President's Pen


## *Dr. Anil Vaishnavi*

*Vice President*

*IAP Delhi*


***Wishing all of you a warm, happy and healthy New Year 2021!***

*This year has started with a new hope of covid-19 vaccine being rolled out to all health care workers and covid-19 warriors. This will be a new beginning of optimistic dawn, post covid-19 pandemic.*

*I congratulate Dr Pankaj Garg, Secretary Elect & Treasurer for restarting E-Journal on a monthly basis, after a gap of 4 years. My best wishes to the editorial team. As theme of this year is "Reach the Unreached: Work for All" it becomes a responsibility of every IAP member to work for the betterment of children and humanity in general.*

*I also want to congratulate our IAP Delhi 2020 team under the leadership of Dr R. K. Nabh and Dr Smita Mishra for keeping the flag of IAP, Delhi flying high as always by winning the IAP Best Branch Award for year 2020.*

*My heartiest congratulations to Dr Piyush Gupta, President CIAP 2021, Prof. Sangeeta Yadav, Vice President IAP North Zone 2021, Dr Harish K Pemde, Jt. Sectary and our CIAP EB members Dr Anurag Agarwal, Dr Ajay Kumar Gupta and Dr Peeyush Khanna for being a guiding force for all of us.*

*In the end, we pledge to carry the good work ahead under the dynamic leadership of Dr Lalit Mendiratta (President) and Dr Manish Gupta (Secretary) IAP, Delhi.*

*Thanks and regards,*

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# IAP Delhi Secretary's Pen


## *Dr. Manish Gupta*

*Secretary*

*IAP Delhi*


***Dear IAP Delhi Members,***

***Happy New Year!!***

*I thank all IAP Delhi Members for showing their trust in me. I do promise to work with full heart for our members. My theme will be to "Reach the Unreached" and involve maximum members in IAP Delhi Activities. We have planned a good number of academic and cultural activities. Many sub speciality CMEs on Rheumatology, Dermatology, Gastroenterology, Neurology, Respiratory Nephrology have been planned. Also we all together must work upliftment of all children by doing due charitable activities. Do call me for any IAP Delhi related need to me at 9811243322. I am always willing to serve you*

*It gives me pleasure to launch* ***DDAP-Delhi Digital Academy of Pediatrics****: Delhi's own platform for E learning where we have already successfully organised three webinars.*

***E RHEUMATPEDIA on DDAP*** *was a huge success.*

*Thanks and Regards*

***Dr Manish Gupta***

*General Secretary*

*IAP Delhi*

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# IAP Delhi President Elect's Pen


## *Dr Deepak Gautam*

*President Elect. 2021*

*IAP Delhi*


*I congratulate Delhi IAP Team 2021 for the flying start to their term and especially Dr. Pankaj Garg, Editor Delhi Pediatrics for reviving the journal in an electronic format. The e-journal is going to highlight recent advances in pediatrics and some interesting articles useful in our clinical practice and daily life. This humble initiative should encourage fellow academy members to contribute write-ups that will hold the interest of readers. I am sure that the positive attitude, hard work and innovative ideas exhibited by the team will stimulate minds of the readers. I take this opportunity to thank all the contributors as their effort will make this journal endearing to our readers. Looking forward to future issues.*

*Regards*

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# IAP Delhi Past President's Pen

**Dr. R K Nabh**
*Past President,*
*IAP Delhi*

*I congratulate Delhi IAP Team 2021 for the flying start to their term and especially Dr. Pankaj Garg, Editor Delhi Pediatrics for reviving the journal in an electronic format. The e-journal is going to highlight recent advances in pediatrics and some interesting articles useful in our clinical practice and daily life. This humble initiative should encourage fellow academy members to contribute write-ups that will hold the interest of readers. I am sure that the positive attitude, hard work and innovative ideas exhibited by the team will stimulate minds of the readers. I take this opportunity to thank all the contributors as their effort will make this journal endearing to our readers. Looking forward to future issues.*

*Regards*

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# IAP Delhi: Vision 2021 by President IAP Delhi

## Dr. Lalit Mendiratta

*President*
*IAP Delhi*

### Bonding with Members:

*IAP Delhi is one family and we all need to help each other and for any kind of assistance any member can call us for help. We would always try to do the best we can.*

### Health:

*We all need to care of our health which is always a priority. The sports related events like cycling, running, indoor and outdoor sports will be a great source of motivation for everyone. Adding spirituality in our life will always be meaningful. We plan to hold spiritual talks for our members in association with Art of Living in this direction. We need to emphasise how important is our mental health.*

### Cultural Events:

*Celebrations of festivals together always not only bring joy and happiness among us but also creates a bonding and cohesiveness amongst us. We already have a plan to organise a combined musical event this year involving all branches and inviting everyone to show their talent.*

### Academic Events:

*We have already planned regular academic activities this year which serves a very useful purpose so that all paediatricians become competent enough to judge and handle any clinical situations at their own health care facilities. I suggest we should gather our own teams to prepare our own TOT modules relating to our Delhi state epidemiological situations, our schools, our state health problems and of courses will carry out all CIAP programs in our state. Academic programs should involve all medical colleges, hospitals and private clinics. We need to involve general practitioners, paramedics in our scientific activities such as immunisation, rational antibiotics therapy, Infectious diseases apart from public health issues. We should stimulate the concept of research in our fraternity; I know it is a long way to go but very important as well. I am very happy to announce that*
*IAP Delhi is a joint partner for* **3rd National Conference of IAP Research in Child Health Society (RESRCHCON)** *Organized by* **IAP RiCHS** *in partnership with* **WHO Collaborating Center for Adolescent Health, LHMC, NQOCN, INCLEN and THSTI** *to be held on 20th and 21st March 2021* **on Delhi platform.**

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## *Dissemination: Reach out:*

*We really want to help our school children, children with disabilities and do something for underprivileged children we need to reach out to them for the best outcome.*

## *Interaction:*

*We would like to seek support of CIAP, UNICEF, WHO, GOI and Delhi Govt for the welfare and benefits of our children and society by shaking hands with them as joint partners with them in their various programs.*

## *Charity:*

*We should try what best we can do by helping these children by generating funds through our academic programs or charity events asking for sponsorship. We can do it; yes we can if we can arrange funds for our conferences than why can't for welfare of underprivileged and deprived children.*

## *Building IAP Delhi:*

*To strengthen and expand IAP Delhi we need to add more numbers in our organisation and I suggest any post graduate at first entry to a medical college must be made a member of IAP and the associated branch. I am happy to announce that we are launching our* ***Delhi Pediatrics E journal*** *on monthly basis after 4 years. IAP Delhi should have more representation in* ***Print and Social Media*** *so that common man knows about us and our contribution to the welfare of children. I suggest that IAP Delhi should spread its wings by interacting with not only other states paediatric associations but also neighbouring SARC nations by mutual academics exchange programs which is quite possible on E platform now a days. Let our organisation, our activities and our guidelines be known in other nations too which over the years help establishing IAP as a strong international society to serve outside our country for health and welfare of children around the world.*

*We owe to the society what we gain in life.*

*Thanks*

***Dr. Lalit Mendiratta***
*President*
*IAP Delhi*

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# IAP Delhi Editor's Desk


## Dr Pankaj Garg

*Treasurer cum Secretary Elect.,*
*IAP Delhi*


*Dear Delhi IAP members and friends,*

*It gives me immense pleasure to present you the first e journal of Delhi Pediatrics. Understanding the problems with printed version of the journal, the current leadership of Delhi IAP under the able leadership of Dr Lalit Mendiratta, has decided to bring monthly e journal to you.*

*I understand this fact very well that there is lots of information available to all of you today and you are right when you ask yourself "Why should I read this journal" or "What new am I going to get from reading this journal". I asked myself the same question and I am trying to answer the same here.*

*The foremost purpose of the journal is to keep you updated about the new developments in the field of academics with minimum efforts. Keeping this in mind, we have articles which deal with the Vaccine Update-2021, NRP 2020, article on "Interpretation of hormonal lab values" and Hepatitis A update. We have kept the articles short and in crisp format for easy reading. To make academics more interesting, we have also started journal clippings and crossword. I request you to send the answers on the email of the Delhi secretariat and we will be publishing names of all sending the correct answers of the crossword in the next issue. We also plan to start photoquiz from the next issue,*

*We have included the vision of our president Dr Lalit Mendiratta in the journal as well as the calendar of events proposed for the year 2021.*

*All the activities done in the month of January along with synopsis of the meeting is also being published for your benefit.*

*Life is not only academics but definitely much more than that. We also plan to dedicate one page to the sports activities of the branch members and one page to the creative writing by the members in form of poem or short stories. I hereby request all of you to send your articles for publication as well.*

*This edition is just a small beginning but with big goals and with your support, we wish to improve with each edition.*

*Happy reading,*

*Long Live IAP.*

*Jai Hind.*

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# Vaccine Update-2021

**Dr Arun Wadhwa**
*Senior Pediatrician,*
*South Delhi*

## COVID19 Vaccines

*With the turn of the year, we got the news everyone was waiting for-grant of Emergency Use authorisation (EUA) of Covid vaccines. On 3rd of January DCGI gave clearance for the use of two Covid vaccines. One is Covishield by Oxford-Asta-Zeneca-SII and the other is Covaxim by Bharat Biotech.*

*Pune-based Serum Institute of India has partnered with the University of Oxford for the mass production of ChAdOx1 vaccine, which has completed and published the interim analysis of the phase 3 trials. It is a non-replicating viral vector vaccine. Genetic material from the Corona virus is encapsulated in a Chimpanzee Adenovirus and injected. It is stored at 2-8oC and is given as two doses 28 days apart. Another vaccine, a live attenuated vaccine, which is attenuated by Codon deoptimization technology, is being jointly developed by Codagenix & Serum Institute of India. Spybiotech's RBD-HBsAg-VLP vaccine is also being jointly developed with Serum Institute of India.*

*India's indigenous COVID-19 vaccine by Bharat Biotech is developed in collaboration with the Indian Council of Medical Research (ICMR) and the National Institute of Virology (NIV), Pune. BBV152 is a whole-virion inactivated vaccine formulated with a TLR 7/8 agonist molecule adsorbed to alum (Algel-IMDG). The indigenous, inactivated vaccine is developed and manufactured in Bharat Biotech's BSL-3 (Bio-Safety Level 3) high containment facility. After successful completion of the interim analysis from the Phase 1 & 2 clinical trials of Covaxin, Bharat Biotech received DCGI approval for Phase 3 clinical trials in 26,000 participants in over 25 centres across India. Phase 3 trials have commenced in multiple centres and are about to be completed very soon. BBL is also working on a nasal live attenuated vaccine Coriflu based on Influenza vaccine backbone.*

*Another four or five home-grown vaccines are in early stages of development. ZyCov-D, a Plasmid-DNA vaccine by Zydus vaccines, has completed phase 1 and 2 trials and has been granted authorization for phase 3 trials. This vaccine is administered intradermally in a 0-28-56 days schedule.*

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*BE vaccines is investigating a RBD-S protein vaccine adjuvanted with CpG 1018 which is administered in 2 doses, IM, on 0 and 28 days. Phase 1-2 trials have been approved by DCGI. In addition, Ohio State Innovation Foundation (OSIF), USA, has licensed novel live attenuated measles virus vectored vaccine candidate, exclusively to Biological E. Limited (BE).*

*In phase 1 and 2 studies, Gamelaya's rAd26 and rAd5 vector-based heterologous prime-boost COVID-19 vaccine (Sputnik V), has demonstrated a good safety profile and induced strong humoral and cellular immune responses in participants. This vaccine is being further developed by Dr Reddy's lab, Hyderabad. It is also a non-replicating viral vector vaccine, but the vector used is a genetically modified human Adenovirus instead of Chimpanzee adenovirus. It uses the prime boost technology when first dose (rAd26) and the second (rAd5) carriers are different.*

*Zuventus and Gennova have joined hands to investigate and manufacture mRNA vaccine in India. Phase I and II trials have started. This will be different than the two mRNA vaccines already in use, in that it will be stored at 2-8oC.*

*In an emergency situation, like the current Covid-19 pandemic, mechanisms have been developed to grant interim approval to a vaccine, if there is evidence of reasonable efficacy and safety. This is known as Emergency Use Authorization (EUA). For an EUA to be issued for a vaccine, for which there is adequate manufacturing information to ensure quality and consistency, the National Regulatory Authority (NRA) must determine that the known and potential benefits outweigh the known and potential risks of the vaccine. Marketing approval is granted only after completion of the trials and analysis of full data. EUA permits governmental bodies to use the vaccine on the public.*

*The United States Food and Drug Administration (USFDA) has also set guidelines for EUA of vaccines. EUA application can be considered only after sufficient data from phase 3 trials, with a median follow-up of at least 2-months, demonstrate efficacy and safety. Data should include phase 3 safety database of well over 3,000 vaccine recipients, representing a high proportion of participants enrolled in the phase 3 study, who have been followed for serious adverse events and adverse events of special interest for at least one month after completion of the full vaccination regimen.*

*The roll out of the vaccine will be on a priority basis – first to the frontline workers and first responders, then people above 50 years of age and those below 50 years with comorbidities. The government has developed a mobile app CoWin through which the appointment and vaccine records will be maintained. A QR code based vaccination certificate will be generated after completion of the two dose vaccination course.*

## PNEUMOSIL-The New 10-valent PCV

*Serum Institute of India Pvt Ltd has recently launched-Pneumosil, The tailored PCV with serotypes 6A & 19A.*

*Pneumococcal pneumonia is the single largest vaccine preventable disease that causes tremendous mortality and morbidity amongst children below 5 years of age. It is estimated that in 2015, there*

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*were 68,7000 deaths in India due to this disease. The disease can be controlled in children with use of pneumococcal polysaccharide conjugate vaccines or PCV. The WHO recommends to choose the right PCV based on the prevalence of the different serotypes in the country/region, vaccine price and other criteria.*

*In spite of the presence of two PCVs in the market, there was a need of another one as one of the brands offered a good coverage but one was unaffordable for the majority and the other brand did not have the serotypes as per the prevalence in our country. Pneumosil appears to bridge this gap. The serotype composition is 1, 5, 6A, 6B, 7F, 9V, 14, 19A, 19F & 23F.*

*Indian Seroprevalence Studies show a significant presence of 6A & 19A with a contribution of up to 13.5% of IPD incidence. Thus, it is important that a PCV has serotypes 6A & 19A in its composition. The GSK PCV-10 has ST 4 and 18C which have a prevalence of around 1-2.5% only and thus have been dropped from this PCV from SII. 6A gives cross protection against 6C also. The serotype coverage difference between this and PCV-13 is now only 1-2%, thus, Pneumosil offers a coverage that is comparable to PCV13 and is higher than the existing PCV10*

*It has a composition that is tailored to the serotype prevalence of S. pneumoniae in India and also other regions of the World making it the First Indian Global PCV. It is WHO pre-qualified for supplies across the world.*

*All serotypes are conjugated with recombinant CRM197 using a novel, patented conjugation chemistry that ensure high quality, stable conjugates with lower free or unconjugated polysaccharide/protein. This leads to excellent stability and lot-to-lot consistency. It has the lowest possible Al3+ content of 0.125 mg/dose as adjuvant which contributes to lower reactogenicity.*

*Two double-blind phase III RCTs were done, one in Gambia (vs Synflorix) and second in India (vs both Prevenar 13 and Synflorix) and the outcome in both were satisfactory.*

*In Gambia in 3+1 schedule, non-inferiority was demonstrated for all 10 serotypes in Pneumosil in comparison to the immune responses induced by the licensed comparator (Synflorix), after a 3-dose primary series, on the basis of both % IgG responders as well as IgG GMC ratios. Good OPA or functional responses were demonstrated for all 10 serotypes in Pneumosil by both % OPA responders (≥ 1:8) as well as OPA GMT ratios. Robust booster IgG and OPA responses were demonstrated for all 10 serotypes in Pneumosil, favourably comparable to those induced by the licensed comparator. Non-inferior, non-interference to all co-administered EPI vaccines was established in comparison to the licensed comparator group. The vaccine had an acceptable safety and tolerability profile, with no notable difference in comparison with the licensed comparator. Antibodies elicited by the booster dose were shown to persist at least as well following Pneumosil as following the licensed comparator for all serotypes over the 1-year follow-up period post booster.*

*In the Indian study, Pneumosil was compared to both Prevenar 13 and Synflorix. The study data indicated comparable immunogenicity of Pneumosil to both licensed comparators using either of the WHO defined IgG endpoints and/or OPA endpoints for all 10 serotypes and thus demonstrates*

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*comparability of Pneumosil with both currently licensed PCVs in India. The vaccine was safe and well tolerated in Indian infants, with a safety and reactogenicity profile favourably comparable to both licensed comparators.*

*Pneumosil is priced at Rs. 1990/-, almost half the price of PCV-13 and also lower than the existing PCV10 making it a very interesting proposition. The drawbacks are lack of effectiveness data, limited efficacy data and the vaccine cannot be used in above 2 years age group. The major advantage of the existing vaccines is their extensive experience, worldwide effectiveness data. GSK PCV-10 can be used till 5 years and PCV-13 till 17 years and adults above 50 years too.*

## *INACTIVATED POLIO VACCINE (STAND ALONE)*

*Another good news in the New Year is the re-availability of standalone IPV. The need for an IPV was felt as the hexa combination of wP and IPV was expensive and all patients were not ready to go to a government facility for fIPV. Moreover, it has been seen that two complete doses of IPV provide better protection than two fIPV. Also, the wP hexa combination is not licensed for use as 18 months and five years boosters. For long term protection from polio five-year IPV booster is now recommended by ACVIP 2020 guidelines. So, IPV can be used in the following situations: 1. For primary series those who could not afford but were forced to use aP hexa combo for its IPV. Now we have an option to give them wP Penta plus IPV separately that will be much cheaper. 2. For those who have not taken any IPV till now. we will be able to give them two doses of IPV 8 weeks apart. 3. For those who have taken two doses of fIPV in public health we will be able to give at least full does IPV for better long-term protection. 4. For boosters again for those not affording aP combo we have now an option of wP based Penta IPV for first booster and DTwP plus IPV for Second booster (Although DTwP alone may be difficult to get). 5. For those above 5 years, who have not received any IPV, we can give Tdap and IPV. There are several countries that use Tdap-IPV in second decade.*

*We might see another IPV coming this year-Sabin IPV. It is the killed Sabin strain of OPV used in our country. DRL has tied up with a Chinese company to import and later manufacture Sabin IPV in India. Sabin IPV has been in use in Netherlands, China and Japan.*

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# Neonatal Resuscitation: 2020 Update

**Dr Kashish Gupta**
*Sir Ganga Ram Hospital*
*New Delhi*

**Dr Anita Singh**
*Sanjay Gandhi*
*PG Institute of Medical*
*Sciences, Lucknow*

**Dr Anup Thakur**
*Sir Ganga Ram Hospital*
*New Delhi*

## Neonatal Resuscitation Guidelines Changes in 2020

***Table 1: Recommendations that have changed***

| | ***2015*** | ***2020*** |
|---|---|---|
| *Anticipation of Resuscita-tion Need* | *At least 1 qualified individual, skilled in the initial steps of new-born care and PPV, whose only re-sponsibility is management of the newly born baby If risk factors present-at least 2 qualified people should be present* | *Every birth should be at-tended by at least 1 person whose primary responsibility is the newborn and who is trained to begin PPV with-out delay.* |
| *Temperature Management* | *In resource limited settings it may be reasonable to nurse well neo-nates with skin-to skin contact or kangaroo mother care. However there is no data examining the use of skin-to-skin contact during resuscitation.* | *Placing healthy newborn in-fants who do not require re-suscitation Skin-to-Skin after birth can be effective in im-proving breastfeeding, tem-perature control, and blood glucose stability* |
| *Cord clamp-ing* | *Umbilical cord clamping should be delayed by 30-60 seconds in most vigorous term and preterm neo-nates* | *It is recommended to delay cord clamping for longer than 30 seconds (No upper limit mentioned)* |

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*Table 1: Recommendations that have changed Continued*

| | | |
|---|---|---|
| *Clearing the Airway in non-vigorous MSL Neonates* | *For non-vigorous MSL neonates, routine intubation for tracheal suction is not suggested* | *For non-vigorous MSL newborn, Routine laryngoscopy with or without tracheal suctioning is not recommended. In case of evidence of airway obstruction during PPV, intubation and tracheal suction can be beneficial* |
| *IV Access* | *It is reasonable to provide drugs by the intravenous route as soon as venous access is established.* | *For babies requiring vascular access, Umbilical vein is rec-ommended route.* |
| *Termination* | *In neonates with no detectable Heart Rate, consider stopping resuscitation if HR remains undetectable for 10 minutes*<br><br>*Use of Sodium bicarbonate not recommended* | *In neonates being resuscitated, if HR is nil & all steps have been performed, Cessation of resuscitation should be discussed with the healthcare team & the family. A reasonable time frame for this change in goals of care is around 20 minutes after birth. May be useful during prolonged arrests after adequate ventilation is established and there is no response to other therapies* |
| *Human & System Per-formance* | *Evidence for focused training at least every 6 monthly: advantages in psychomotor performance and knowledge &confidence* | *For non-vigorous MSL newborn, Routine laryngoscopy with or without tracheal suctioning is not recommended. In case of evidence of airway obstruction during PPV, intubation and tracheal suction can be beneficial* |

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| ***Table 2: Recommendations that remain unchanged*** | |
|---|---|
| *Anticipation & Preparation* | • ***Before the birth:***<br>  • *A standard risk factor assessment tool to assess perinatal risk*<br>  • *A standard equipment checklist*<br>• ***Briefing****: When high risk birth expected, briefing of the team to assign roles and identify expected interventions.* |
| *Initial As-sessment &Intervention* | • *Temperature:*<br>• *Newly born babies should be maintained between 36.5°C & 37.5°C.*<br>• *All resuscitation procedures done with temperature-controlling interventions in place.*<br>• *Use of warming adjuvants like radiant warmers, plastic bags, wraps and warmed humidified inspired gases is advocated*<br>• *Suctioning and stimulation*<br>  • *Routine suctioning of new born babies not recommended.*<br>  • *Tactile stimulation can be given for ineffective respiratory effort or apnea.* |
| *Physiological Monitoring & Feedback Devic-es* | • *ECG may be used for the rapid and accurate measurement of the newborn's heart rate.* |
| *Ventilation & Oxygenation* | • ***PEEP vs No PEEP***<br>  • *In newly born infants receiving PPV, it may be reasonable to provide positive end-expiratory pressure (PEEP)*<br>• ***PPV***<br>  • *PPV should be initiated in babies who do not breathe within the first 60 seconds after birth or have heart rate less than 100/ min despite appropri¬ate initial actions*<br>  • *Peak inflation pressure of 20-25 cm H2O used*<br>  • *It is reasonable to administer positive end expiratory pressure while providing PPV*<br>  • *Provide PPV at the rate of 40-60/min*<br>  • *Initiate PPV with inspiratory time < 1 seconds*<br>  • *Sustained inflations shouldn't be performed*<br>• ***CPAP***<br>  • *CPAP should be used rather than intubation for spontaneously breathing babies laboured respiration*<br>• ***Oxygen administration***<br>  • *Initiate with 21% inspired oxygen in term/late preterm neonates and 21%to 30% inspired oxygen concentration for preterm neonates <34 weeks requiring respiratory support.*<br>  • *Use of 100% inspired oxygen should be avoided* |

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| | |
|---|---|
| *Circulatory Support* | • *Start chest compressions if heart rate remains <60/min despite adequate ventilation for > 30 seconds.*<br>• *Higher concentration of inspired oxygen can be used.*<br>• *Deliver 3 compressions before or after each inflation: providing 30 inflations and 90 compressions per minute (3:1 ratio for total 120/ minute).*<br>• *Reasonable to choose the 2 thumb–encircling hands technique over the 2-finger technique.* |
| *Drug & Fluid Administration* | • *Umbilical vein is the recommended route for babies requiring epinephrine/volume expanders .*<br>• *If IV route not possible, intraosseous route should be used.*<br>• *Epinephrine administration is required if heart rate remains less than 60/min despite 60 seconds of chest compressions and effective PPV with 100% oxygen.*<br>• *Epinephrine should be administered at the dose of 0.01-0.03 mg/kg via intravenous access.*<br>• *Can be repeated every 3-5 minutes if HR< 60/min.*<br>• *Volume expanders in the form of NS or blood @ 10-20 ml/kg can be given to neonates with bradycardia despite adequate ventilation, chest compressions and epinephrine.* |
| *Post Resuscitation Care* | • *Close monitoring of the babies who required prolong PPV or advanced resuscitation.*<br>• *Monitor blood glucose levels and treat for hypoglycemia if required.*<br>• *Therapeutic hypothermia should be offered to neonates with gestation 36 weeks or more having features of moderate to severe HIE.* |

## Conclusions:

*In 2020 guidelines, there have subtle differences since the 2015 guidelines. But some changes may not be applicable in resource poor settings in our country. NNF India should bring out recommendations to guide the resuscitation methods to be followed in our country. This will ensure uniformity in the methods followed by clinicians on regular basis for practicing resuscitation.*

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# Interpretation of Hormonal Lab Values

**Dr. Ravindra Kumar**
*I/C Pediatric & Adolescent Endocrinology*
*Hindu Rao Hospital & North Delhi Municipal Medical College*

- *The pediatric endocrinology is heavily dependent on the laboratory to make a diagnosis for patient management.*
- *Hormones circulate at remarkably low levels, yet relatively small perturbations can distinguish health from disease states.*
- *To reach an appropriate level of sensitivity and specificity at these concentrations of an analyte, two types of assays are generally employed:.*
    1. *Immunoassays (both competitive and sandwich)*
    2. *Tandem mass spectrometry (MS/MS) coupled with chromatography*
- ***Also hormone require the correct circumstances for proper testing e.g.,***
    1. *Fasting (TSH, Prolactin, IGF1)*
    2. *Time of day (Cortisol, ACTH)*
    3. *Stimulation protocol (GH, LH,FSH)*
    4. *Stability at room temperature (PTH, ACTH, etc are heat labile).*
- ***A specific laboratory method to be utilized.***
- ***Unit has to be seen carefully, for conversion may use www.endmemo.com.***

## Growth Hormone

- *Difficult assessment as GH secretion is pulsatile.*
- *Between normal pulses of GH secretion, levels are low (often <0.1 ng/ml) hence no role of random value except in GH excess.*

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- *To make diagnosis of GHD (Growth Hormone deficiency) requires stimulation of pituitary and two stimulation test with different agents are required.*
- *Pharmacologic stimulating agent includes levodopa, clonidine, glucagon, propranolol, arginine, and insulin.*
- *Collect blood sample at 30,60,90 and 120 minute after stimulation.*
- *Patients must be euthyroid at the time of testing.*
- *Tests should be performed after an overnight fast.*
- *For prepubertal children, pre-treating with sex hormones increases the specificity of the tests.*
- *Value less than 10 ng/ml defines GHD.*

## Measurement of IGF-I & IGF binding proteins ( IGFBP3)

- *GH action is mediated via the production of IGF-I and severe GHD is associated with a reduction in their concentrations.*
- *IGF-I and IGFBP-III concentrations in the circulation are valuable markers of GH insufficiency and are frequently used as an adjunct to provocative testing.*
- *IGF-I and IGFBP-III concentrations are highly method dependent and are affected by age, sex and pubertal status.*
- *As a result, IGF-1 levels in normal children younger than 5 years of age may be so low that extensive overlap exists between the normal range and values in GH-deficient children.*
- *Serum concentrations of IGF-1 (and IGFBP-3) are frequently normal in children with GHD resulting from brain tumors or cranial irradiation.*

## Thyroid Hormones

- *Thyroid function assessed by measurement of total T4 and T3 levels, FT4, FT3, TSH etc.*
- *Evaluation should be done by chemiluminiscent essay.*
- *Critical in the interpretation of thyroid hormone concentration is the recognition that concentrations of T4, T3, and TSH vary with age.*
- *Any value of FT4 < 1.1ng/dl in neonatal age is abnormal.*
- *For congenital hypothyroidism TSH/FT4 should be done 48-72 hours/cord blood.*

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- *When FT4 values are normal yet total T4 values are high, familial dysalbuminemic hyperthyroxinemia needs to be considered.*
- *If FT4 values are normal but total T4 values are low, the possibility of TBG deficiency must be entertained.*
- *While evaluating for congenital hypothyroidism*
  - a *If venous free T4 (FT4) concentration is below norms for age, treatment should be started immediately.*
  - b *If venous TSH concentration is > 20 mU/L, treatment should be started, even if FT4 concentration is normal.*

## *Reference Range-Neonatal Period*

***Table 2 Age wise reference range for thyroid functions tests in enonatal age group***

| | *Age* | *T4* | *FT4* | *TSH* |
|---|---|---|---|---|
| *Term Neonates*[a] | *Cord* | *100-170 nmol/L* | *13.8-26 pmol/L* | *2.22-10.66 mlU/L* |
| | | *7.79-13.14 µg/DL* | *1.07-2.02 ng/DL* | |
| | *1st Day* | *130-269 nmol/L* | *15.4-33.5 pmol/L* | *2.69-26.5 mlU/L* |
| | | *10.1-20.9 µg/DL* | *1.07-2.02 ng/DL* | |
| | *3rd Day* | *127-227 nmol/L* | *15.4-42.5 pmol/L* | *2.8-18.6 mlU/L* |
| | | *9.9-17.6 µg/DL* | *1.2-3.3 ng/DL* | |
| | *7th Day* | *104-260 nmol/L* | *14.5-35 pmol/L* | *1.34-12.08 mlU/L* |
| | | *8.05-20.15 µg/DL* | *1.13-2.69 ng/DL* | |
| | *10th Day* | *119-248 nmol/L* | *15.2-32 pmol/L* | *1.19-10.72 mlU/L* |
| | | *9.21-19.26 µg/DL* | *1.18-2.49 ng/DL* | |
| | *14th Day* | *125-281 nmol/L* | *14.5-29 pmol/L* | *1.72-7.87 mlU/L* |
| | | *9.7-21.8 µg/DL* | *1.13-2.23 ng/DL* | |
| | *28th Day* | *103-216 nmol/L* | *16-25 pmol/L* | *2.02-4.9 mlU/L* |
| | | *8.03-16.82 µg/DL* | *1.23-1.94 ng/DL* | |
| *Preterm Neonates*[b] | *28-40 Week Post Conception Age* | | *10-33 pmol/L* | *0.8-12 mlU/L* |
| | | | *0.78-2.56 ng/DL* | |

[a]*Mutlu M et al, J Matern Fetal Neonatal Med. 2012;25:120-4*
[b]*Clark S J et al, J Perinatol. 2001;21:531-6.*

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| Reference Range - Post Neonatal Period | | | |
|---|---|---|---|
| Age Group | T4 | FT4 | TSH |
| 1-3 Mth | 82-235 nmol/L | 13.4-44 pmol/L | 0.58-5.57 mlU/L |
| | 6.4-18.3 µg/DL | 1.04-3.4 ng/DL | |
| 3-12 Mth | 91-219 nmol/L | 14-31 pmol/L | 0.57-5.54 mlU/L |
| | 7-17 µg/DL | 1.1-2.4 ng/DL | |
| 1-5 Yrs | 91-192 nmol/L | 14-26 pmol/L | 0.56-5.41 mlU/L |
| | 7-15 µg/DL | 1.1-2 ng/DL | |
| 5-8 Yrs | 74-166 nmol/L | 13.4-25 pmol/L | 0.55-5.31 mlU/L |
| | 5.7-13 µg/DL | 1.04-1.94 ng/DL | |
| 8-12 Yrs | 65-150 nmol/L | 12.7-24 pmol/L | 0.55-5.31 mlU/L |
| | 5-11.6 µg/DL | 0.99-1.86 ng/DL | |
| 12-18 Yrs | 62 nmol/L | 12.-23 pmol/L | 0.51-4.93 mlU/L |
| | 4.8-10.5 µg/DL | 0.93-1.78 ng/DL | |
| Lem A Jet al, J Clin Endocrinol Metab, 2012;97:3170-8 | | | |

## VIT D & PTH

- Preferred method of estimation –chemiluminescence
- 25(OH)D <12 ng/ml-deficiency
- 12-20 ng/ml- insufficiency
- >20 ng/ml- sufficiency
- >100 ng/ml- hypervitaminosis
- The normal range of serum intact PTH values is 10–65 pg/mL.
- PTH ( heat labile) should be transported immediately and on ice else may give falsely low value.

## Cortisol & ACTH

- Random cortisol concentrations are of no value.
- Plasma concentrations of ACTH and cortisol tend to be high in the morning and low in the evening.

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- *Peak ACTH levels are usually seen at 4 to 6 a.m., and peak cortisol levels follow at about 8 a.m.*
- *Preferred method of estimation of Serum cortisol is - LC-MS/MS.*
- *Usual method of estimation of Serum ACTH is immunoassay however sample must be drawn in plastic syringe containing heparin or EDTA and quickly transported in plastic tubes on ice, as ACTH adheres to glass and is quickly inactivated.*
- *Morning plasma cortisol concentrations of < 3 µg/dL are highly suggestive of adrenal insufficiency.*
- *To evaluate adrenal excess measurement of serum cortisol after use of suppressing agent is required.*

| | *CORTISOL (µg/dl)* | *ACTH* |
|---|---|---|
| *NEWBORN* | *5* | |
| *INFANTS* | *9* | |
| *1-2 Yrs* | *4-20* | |
| ➢ *2 Yrs 8 AM* | *10-20* | *Rarely > 50 pg/ml* |
| ➢ *2 Yrs 4 PM* | *5-10* | *Usually undetectable* |

## *LH & FSH*

- *Third generation, monoclonal-antibody-based, "pediatric" immunoassays for gonadotropins are necessary for early detection of disease.*
- *Secretion is pulsatile hence a single day time sample does not necessarily truly represent a child's pubertal status.*
- *Levels vary with age and pubertal status.*
- *The serum LH response to GnRH agonist is more indicative of the pubertal status.*
- *Hence to make diagnosis of precocious puberty/delayed puberty requires stimulation of pituitary by GnRH agonist (inj. Luprolide, inj triptorlin etc) is required.*
- *Collect blood sample at 30,60,90 and 120 minute after stimulation.*
- *An LH level post-GnRH agonist of ≥ 5.5 U/L is more specific for the onset of puberty in both sexes.*
- *Greater rise in FSH with low LH is seen in premature thelarchae.*
- *Early morning basal LH ≥ 0. 0.6 U/L may indicate diagnosis of central precocious puberty in girls.*

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## 17-OHP

- Morning sample; Fasting state not required
- Most common methods: fluoroimmunoassay
- Confirmatory methods: LC-MS/MS (steroid profiling)
- Random levels >100s-1000s ng/mL: Classical CAH
- ACTH stimulated levels if borderline cases or non-classical CAH.
- Avoid first 48 hrs of life as levels are high.
- levels may be erroneous:
  - Antenatal corticosteroids to the mother
  - Preterm babies
  - Sick babies
- Recall and retest after 2 weeks in above cases

**Table 1:**
**Gestational age and birthweight-based cut-offs for blood levels of 17-hydroxy progesterone for newborn screening for congenital adrenal hyperplasia**

| Gestational age (Completed Week) | Birthweight < 2500 g | Birthweight ≥ 2500 g |
|---|---|---|
| ≤ 32 Week | 81 | 51 |
| 33-36 Week | 42 | 37.5 |
| ≥ 37 Week | 37.5 | 37.5 |
| **Birthweight** | **Pretern (< 37 Week)** | **Term (≥ 37 Week)** |
| <1000 g | 189 | 153 |
| 1000-1499 g | 82 | 71 |
| 1500-2499 g | 42 | 37.5 |
| ≥2 500 g | 37.5 | 37.5 |

Blood values when performed between 2nd - 7th day of life; all values in nmoL/L (convert nmoL/L to ngmL by multiplying by 0.66)

## Bibilography;

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4 Pallavi vats, aashima dabas, sangeeta yadav, ravindra kumar et al Newborn Screening and Diagnosis of Infants with Congenital Adrenal Hyperplasia.Indian Pediatrics. 2020;57 : 49-56.

5 Desai MP, Sharma R, Riaz I, Sudhanshu S, Parikh R, Bhatia V. Newborn Screening Guidelines for Congenital Hypothyroidism in India: Recommendations of the Indian Society for Pediatric and Adolescent Endocrinology (ISPAE) - Part I: Screening and Confirmation of Diagnosis.Indian J Pediatr. 2018 June; 85(6):440-447.

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# Hepatitis a disease & vaccination

## Panel Discussion on 11th January 2021 on DIAP Web Platform




**Dr Nishant Wadhwa** **Dr Puneet Kumar** **Dr P S Narang** **Dr Anurag Agarwal**

1 *Incidence of Acute liver failure (ALF) is 0.1 to 0.4 percent of cases; a potential fatal complication.*

2 *Hepatitis A alone or along with Hepatitis E constitutes the commonest cause of acute liver failure in children in India.*

3 *The atypical clinical presentations include relapsing hepatitis, prolonged cholestatic hepatitis (may require steroid therapy for resolution of symptoms), bone marrow suppression, membrano-proliferative glomerulonephritis and reactive arthritis.*

4 *A rising INR beyond 2, even in the absence of encephalopathy which is non responsive to vitamin K indicates ALF. A shrinking liver span associated with rising jaundice and falling transaminases constitute ominous signs indicating clinical deterioration. Rising Lactate, ammonia, hypoglycemia and dyselectrolemia make indication to transfer to a center equipped to handle such patients including ability to do liver transplantation.*

5 *With improvement in hygiene standards in India in last few decades, India is transitioning from high endemicity to intermediate endemicity; although there is lot of area to area variation. With this change it is expected that the burden of symptomatic Hepatitis A will paradoxically increase. Outbreaks can occur.*

6 *We have excellent vaccines to prevent Hepatitis A. Both inactivated and live attenuated vaccines have excellent safety profile, immunogenicity, long term (possibly lifelong) persistence of antibodies, proven field efficacy and effectiveness.*

7 *Inactivated vaccines have 2 dose schedule and administered intramuscularly while live attenuated have single dose schedule and administered subcutaneously.*

8 *Except in special circumstances like immunocompromised (live vaccine contraindicated) or coagulation disorder (subcutanuous route preferred) any vaccine can be used.*

9 *Countries which introduced mass vaccination with hepatitis A vaccine are reaping rich benefits with almost vanishing of the disease (even with single dose inactivated vaccine as in Argentina).*

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# IAP Delhi Suggestions to Govt regarding COVID19 vaccination

***IAP Delhi*** *was invited by* ***Govt agencies as part of COVID19 Task Force, NCTD*** *at Delhi Secretariat on 2nd January 2021. The meeting was* ***attended by President and Secretary, IAP Delhi*** *and following suggestions were given:*

1. *Vaccination centre should* ***not be overcrowded****, allow one patient at a time.*
2. ***Observe*** *any* ***patient for minimum 30 minutes*** *after vaccination.*
3. *Anaphylaxis due to any vaccination is a rare and many would have more of vasovagal symptoms but we need to sensitize the health workers for any side effects and observation is a must after every dose for 30 minutes.*
4. *Injection epinephrine is the most important tool to be available and every HCP and HCW to be educated about its administration.*
5. *Patient should be transported immediately to nearby hospital or health care facility for serious untoward side effects.*
6. *Like any national program HCPs should be immune to legal allegations.*

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# IAP Delhi Calender 2021
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*Treasurer, IAP Delhi*

**Dr. Anil Vaishnavi**
*Vice President, IAP Delhi*

| Date | Academics | Co-curricular Activity |
|---|---|---|
| 14th-15th January, 2021 | E-Rheumatpedia | Academics Activity |
| Sunday, 24th January, 2021 | Raag-n-Sur | Cocurricullar Activity |
| Thursday, 18th February, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| 25th-26th February, 2021 | E-Dermapedia | Academics Activity |
| Sunday, 28th February, 2021 | Cyclathon | Cocurricullar Activity |
| Thursday, 18th March, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| 20th-21st March 2021 | ResRCHcon 2021 | Academics Activity |
| Sunday, 21st March, 2021 | Downs Syndrome Day | Cocurricullar Activity |
| 25th-26th March, 2021 | Gastropedia | Academics Activity |
| Thursday, 15th April, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| 29th-30th April, 2021 | Neuropedia | Academics Activity |
| Sunday, 25th April, 2021 | Geet aur Niratya | Cocurricullar Activity |
| 13th-14th May, 2021 | Carcon | Academics Activity |
| Saturday, 15th May, 2021 | IAP Delhi Sports Meet | Cocurricullar Activity |
| Thursday, 20th May, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Monday, 31st May, 2021 | Case Based Cme | Cocurricullar Activity |
| Saturday, 5th June, 2021 | World Environment Day (Plantation by Members) | Cocurricullar Activity |

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# IAP Delhi Calender 2021
# IAP Delhi Team 2021

| | | |
|---|---|---|
| Thursday, 17th June, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Sunday, 20th June, 2021 | Delhi Respicon | Academics Activity |
| Monday, 21st June, 2021 | Yoga Day | Cocurricullar Activity |
| Saturday, 26th June, 2021 | International Day against substance abuse (Book Release) | Cocurricullar Activity |
| Thursday, 15th July, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Sunday, 18th July, 2021 | Hematopedia | Academics Activity |
| Thursday, 29th July, 2021 | ORS Day (Book Release on Diarrhea) | Cocurricullar Activity |
| Thursday, 12th August, 2021 | Nephropedia | Academics Activity |
| Sunday, 1st August, 2021 | Breastfeeding Week | Cocurricullar Activity |
| Thursday, 19th August, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Sunday, 29th August, 2021 | IAP Charity Day | Cocurricullar Activity |
| 11th-12th September, 2021 | PCNI 2021 | Academics Activity |
| Thursday, 16th September, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Saturday, 25st September, 2021 | National Daughter Day | Cocurricullar Activity |
| 14th-15th October, 2021 | Adolescon | Academics Activity |
| Thursday, 21st October, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Sunday, 14th November, 2021 | Children's Day | Cocurricullar Activity |
| Thursday, 18th November, 2021 | IAP Delhi Monthly Clinical Meeting | Academics Activity |
| Sunday, 21st November, 2021 | Immunization Update | Cocurricullar Activity |
| Sunday, 28th November, 2021 | IAP ALS Program | Cocurricullar Activity |
| Sunday, 12th December, 2021 | IAP Delhi Annual Day | Academics Activity |

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# IAP Delhi January Activity Report

1. ***Installation ceremony of IAP Delhi*** *Team 21 and Thanks giving ceremony of IAP Delhi Team 20 was organized on 10th January at Radisson Blue Hotel Dwarka. All CIAP IAP Delhi OB & EB Members and IAP Delhi City branches Presidents & Secretaries were invited. Most of the invitees attended the meeting & were happy to physically see each other almost after 10 months.*

2. *IAP Delhi made a* ***whatsapp group of IAP Delhi Fitness and Cultural*** *to promote creative arts & physical fitness among members. This will help in planning & organizing activities in this direction for year 2021*

3. ***DDAP-Delhi Digital Academy of Pediatrics platform of IAP Delhi for E learning*** *was launched on 6th January 2021* ***Dr Manish Gupta gave talk on COVID Vaccines-World & India"*** *which was attended by 50 participants*

4. *On 11th January 2021* ***Webinar on Hepatitis A Diseases and Vaccinations*** *was organized with Panelists* ***Dr Anurag Agarwal, Dr P S Narang, Dr Nishant Wadhwa, Dr Puneet kumar.***
   *This event was a huge success with 75 participants.*

5. *On 12th January -* ***Panel Discussion - Pediatric Nephrotic Syndrome*** *done by* ***Dr Vinay Agarwal, Dr Kanav Anand, Dr Swati Bhardwaj*** *-110 participants*

6. ***E Rheumatpedia*** *was a huge success with 250 delegates from all over India and Best National Pediatric Rheumatology Faculty. The CME was well appreciated by delegates & CIAP and IAP Delhi Seniors & Colleagues.*

7. ***Dr Lalit Mendiratta gave message on Radio mirchi*** *regarding the mental health of children in COVID 19 times "As a paediatrician and President IAP Delhi I would advice all parents to encourage their child in playful activities at home such as indoor games, exercise, yoga and not only that they should develop in them some hobbies such as reading, writing, music and dance. These simple measures will not only help decrease their screen time but will have an overall positive impact on their mental health"*

***Dr Manish Gupta***
*General Secretary IAP Delhi*

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# IAP Delhi Upcoming Events
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*Vice President, IAP Delhi*

## • Enteric Fever : Diagnosis and Prevention CME

*03.30 to 04.30 pm,* ***Tuesday, 16 February, 2021***
*Online CME for IAP Delhi Members*

## • E-Dermapedia

***25th-26th February, 2021***
*Virtual Pediatric conference will be organized with registration charges*
₹250/- *for IAP Delhi Members*
₹350/- *for Non IAP Delhi Members*

## • Cyclathon

***Sunday, 28 February, 2021***
*Cycling event to inspire fitness awareness among IAP Delhi Members*

## • IAP Delhi Monthly Clinical Meeting

***Thursday, 18 February, 2021***
*Virtual Meeting in association with IAP Delhi Central Zone*

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# JOURNAL CLIPPINGS

## 1 Genetic associations with fever after measles-containing vaccines

*(Human Vaccines and Immunotherapeutics 2020)*

*In the last few decades our insight in genetic factors underlying almost every aspect of health and disease has increased tremendously. In this study published online in Dec 2020, Klien et al.have tried to explore genetic and immunologic associations of developing fever after measles containing vaccine (MCV). Concurrent with a randomized Phase 3 clinical trial of 12–15-month-olds who received their first measles-mumps-rubella (MMR) vaccine in which parents recorded post-vaccination temperatures daily, the investigators collected additional blood and performed human leukocyte antigens (HLA) typing in a subset of children (n=86). 13 of them (15.1%) had MMR-associated fever. They compared 42-day post-vaccination geometric mean titers (GMT) to measles between children who did and did not have fever using a t-test. Logistic regressions identified associations between MMR-associated fever and HLA Class I loci A-29:02 (P=.036), B-57:01 (P=.018), C-06:02 (P=.006), C-14:02 (P=.022), and Class II loci DRB1-15 (P=.045). However, Bonferroni's adjustment for multiple comparisons suggests that these associations could have been due to chance. Ninety-eight percent of children had protective antibody titers to measles; however, GMT was higher among those with fever compared with children without fever (P= .006). Fever after the measles vaccine correlated with genetic factors and higher immune response. This study suggests a possible genetic susceptibility to MMR-associated fever.*

**Courtesy:** *...www.tandfonline.com.* **Read the full article.**
**https://doi.org/10.1080/21645515.2020.1849520**

## 2 Long-term effectiveness of the nine-valent human papillomavirus vaccine in Scandinavian women: interim analysis after 8 years of follow-up

*(Human Vaccines and Immunotherapeutics 2020)*

*Nanovalent Human Papillomavirus Vaccine (9vHPV) is available internationally and is likely to be available in India soon (personal communication). This study by Kjaer et al published in December 2020 shares interim 8 year-data of the study that was initiated to study vaccine efficacy study in young women aged 16–26 years to evaluate if vaccine effectiveness for up to 14 years post-vaccination will remain above 90%. Vaccine effectiveness was defined as as percent reduction in the incidence of HPV16/18/31/33/45/52/58-related high-grade cervical dysplasia in the study cohort relative to expected incidence in a similar unvaccinated cohort. Overall, 2029 participants from Denmark, Norway, and Sweden who received the 9vHPV vaccine during the clinical efficacy study continued into the study. National health registries were used to identify screening attendance and cervical pre-cancer/cancer diagnoses. Tissue samples were retrieved for HPV testing by PCR and pathology diagnosis adjudication. A control chart method was used to detect signals indicative of vaccine effectiveness waning below 90%. No new cases of HPV16/18/31/33/45/52/58-related high-grade cervical dysplasia were observed during the study period over 4084.2 person-years' follow-up (per-protocol effectiveness population; n = 1448). Thus, there were no signals indicative of vaccine effectiveness waning below 90%. These observations show that the 9vHPV vaccine provides continued statistically significant protection through at least 6 years, with indications of continued effectiveness through 8 years.*

**Courtesy:** *...www.tandfonline.com.* **Read the full article.**
**https://doi.org/10.1080/21645515.2020.1839292**

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# JOURNAL CLIPPINGS

## 3 Risk of Electrolyte Disorders in Acutely Ill Children Receiving Commercially Available Plasma like Isotonic Fluids: A Randomized Clinical Trial

*(Human Vaccines and Immunotherapeutics 2020)*

*Currently, isotonic fluids are recommended as maintenance fluids in children. In this randomized control trial, Lehtiranta et al have tried to evaluate the risk of dyselectrolytemia in acutely ill children with use of plasma-like isotonic fluids as compared to those receiving moderately hypotonic fluid therapy with 20 mmol/L of potassium that was widely used previously. 614 study subjects (mean [SD] age, 4.0 [3.1] years, 51% boys) were randomized to receive commercially available plasma-like isotonic fluid therapy (140 mmol/L of sodium and 5 mmol/L potassium in 5% dextrose) or moderately hypotonic fluid therapy (80 mmol/L sodium and 20 mmol/L potassium in 5% dextrose). primary outcome was the proportion of children with any clinically significant electrolyte disorder, defined as hypokalemia less than 3.5 mmol/L, hypernatremia greater than 148 mmol/L, or hyponatremia less than 132 mmol/L during hospitalization due to acute illness. The main secondary outcomes were the proportion of children with severe hypokalemia and weight change. Clinically significant electrolyte disorder was more common in children receiving plasma-like isotonic fluid therapy (61 of 308 patients [20%]) compared with those receiving moderately hypotonic fluid therapy (9 of 306 patients [2.9%]; 95% CI of the difference, 12%-22%; P < .001). The risk of developing electrolyte disorder was 6.7-fold greater in children receiving isotonic fluid therapy. Hypokalemia developed in 57 patients (19%) and hypernatremia developed in 4 patients (1.3%) receiving plasmalike isotonic fluid therapy. Weight change was greater in children receiving isotonic, plasmalike fluid therapy compared with those receiving mildly hypotonic fluids (mean weight gain, 279 vs 195 g; 95% CI, 16-154 g; P = .02).*

**Courtesy:** ...JAMA Pediatric. **Read the full article.**
**https://doi.org/10.1001/jamapediatrics.2020.3383**

## 4 Enteral Vitamin A for Reducing Severity of Bronchopulmonary Dysplasia: A Randomized Trial

*Abhijeet A et al conducted a double-blind randomized controlled trial in infants <28 weeks' gestation who were to receive either enteral water-soluble vitamin A (5000 IU per day) or a placebo. Supplementation was started within 24 hours of introduction of feeds and continued until 34 weeks' postmenstrual age (PMA). The primary outcome was the severity of BPD, assessed by using the right shift of the pulse oximeter saturation versus the inspired oxygen pressure curve. A total of 188 infants were randomly assigned. The mean ± SD birth weight (852 ± 201 vs 852 ± 211 g) and gestation (25.8 ± 1.49 vs 26.0 ± 1.39 weeks) were comparable between the vitamin A and placebo groups. There was no difference in the right shift (median [25th–75th percentiles]) of the pulse oximeter saturation versus inspired oxygen pressure curve (in kilopascals) between the vitamin A (11.1 [9.5–13.7]) and placebo groups (10.7 [9.5–13.1]) (P = .73). Enteral vitamin A did not affect diagnosis of BPD or other clinical outcomes. Plasma retinol levels were significantly higher in the vitamin A group versus the placebo group on day 28 and at 34 weeks' PMA.*

**Courtesy:** ...Pediatric (Official Journal of the American Academy of Pediatrics). **Read the full article.**
**https://doi.org/10.1542/peds.2020-009985**

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# JOURNAL CLIPPINGS

## 5 Early Physical Abuse & Adult Outcomes (Pediatrics January 2021, 147 (1) e20200873) & Child Maltreatment & Mortality in Young Adults

*CThese two studies on similar topic have been published in current issue of Pediatrics. In first one, researchers in two multisite studies recruited children at kindergarten entry and followed them into adulthood. Parents completed interviews about responses to the child's problem behaviors during the kindergarten interview. Interviewers rated the probability that the child was physically abused in the first 5 years of life. Adult outcomes were measured by using 23 indicators of education and economic stability, physical health, mental health, substance use, and criminal convictions reported by participants and their peers and in school and court records. They found that controlling for potential confounds, relative to participants who were not physically abused, adults who had been abused were more likely to have received special education services, repeated a grade, be receiving government assistance, score in the clinical range on externalizing or internalizing disorders, and have been convicted of a crime in the past year (3.20, 2.14, 2.00, 2.42, 2.10, and 2.61 times more likely, respectively) and reported levels of physical health that were 0.10 SDs lower. No differences were found in substance use.*

*The second study is retrospective cohort study of all persons born in South Australia 1986 to 2003 using linked administrative data. Chile maltreatment (CM) exposure was based on child protection service (CPS) contact: unexposed, no CPS contact before 16 years, and 7 exposed groups. Deaths were observed until May 31, 2019 and plotted from 16 years. Adjusted hazard ratios (aHRs) by CPS category were estimated using Cox proportional hazards models, adjusting for child and maternal characteristics. Incident rate ratios (IRRs) were derived for major causes of death, with and without CPS contact. The cohort included 331 254 persons, 20% with CPS contact. Persons with a child protection matter notification and non-substantiated or substantiated investigation had more than twice the death rate compared with persons with no CPS contact: aHR = 2.09 (95% confidence interval [CI] = 1.62–2.70) to aHR = 2.61 (95% CI = 1.99–3.43). Relative to no CPS contact, persons ever placed in out-of-home care had the highest mortality if first placed in care aged ≥3 years (aHR = 4.67 [95% CI = 3.52–6.20]); aHR was 1.75(95% CI = 0.98–3.14) if first placed in care aged <3 years. The largest differential cause-specific mortality (any contact versus no CPS contact) was death from poisonings, alcohol, and/or other substances (IRR = 4.82 [95% CI = 3.31–7.01]) and from suicide (IRR = 2.82 [95% CI = 2.15–3.68]).*

**Courtesy:** *...Pediatric (Official Journal of the American Academy of Pediatrics).* **Read the full article.**
**https://doi.org/10.1542/peds.2020-0873**

**Compiled by Dr Puneet Kumar**

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# Section III: Activity

## Crossword January 2021

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | | | 11 | | | | | |
| 2 | | | | | | | 12 | |
| 3 | | 13 | | | | 4 | 14 | 15 |
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| | | | | | 9 | | | |
| | | | | 10 | | | | |
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| | | | | | | | | |

*Across*

1 *This sign indicates the organ of immunity* (4)
2 *This simple therapeutic strategy has saved millions of children in the world* (3)
3 *In this territory, you are almost dead* (9)
4 *Constipation is a common cause of this* (3)
5 *Viruses do this to lungs* (3)
6 *Overweight adolescents have this* (4)
7 *This gives you most calories with brain factor* (3)
8 *All were waiting for this in year 2020* (7)
9 *Serious infection with bullae* (4)
10 *We all belong to this organization* (3)

*Vertical*

1 *You need this for proper functioning* (3)
7 *It prevents CLD* (4)
8 *Technique to peep into the chest* (4)
11 *This reflex named after an animal can indicate a tumor* (10)
12 *Fortified food with brain advantage* (4)
13 *Opportunistic* (8)
14 *Almost dead* (4)
15 *Painless bleed* (5)
16 *Resolution power of an imaging technique* (5)

**Contributed by Dr Pankaj Garg**

***Please send correct answers photoshot with your name on IAP Delhi eMail. We will be publishing names as well as correct answers in next e Journal (XXXVIII No. 2)***

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# IAP Delhi Membership Form

| | | | | | |
|---|---|---|---|---|---|
| Name of the Applicant | | | | | |
| Designation | | Date of Birth | | | |
| Email Id | | Sex: ☐ Male ☐ Female | | | |
| Postal Address for Communications | | | | | |
| Tel Residence | | Office | | Mob. | |

Name of Zonal Branch you would like to join ☐ Central ☐ East ☐ West ☐ North ☐ South:

Whether Central IAP member, if so Membership No:

.....

| No | Educational Qualification | Name of the University | Qualifying Year |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

| Medical Council Reg. No | Reg. Authority (e.g. MCI/State Medical Council) |
|---|---|
| ..... | ..... |

**Name & Address of the Proposer**

| Membership No. of the Proposer | | Signature | |
|---|---|---|---|

**Name & Address of the Seconder**

| Membership No. of the Seconder | | Signature | |
|---|---|---|---|

**Declaration** : I hereby declare that I have never been arrested/prosecuted and convicted by a criminal court or involved in any case registered by the police.

| | |
|---|---|
| | |
| Place & Date | Signature of the Applicant |

| Membership Category | Fee | Category | Total Amount Payable |
|---|---|---|---|
| Life | ₹ 2000/- | ₹ 2000/- | ₹ 2000/- |
| Associate Life | ₹ 2000/- | ₹ 2000/- | ₹ 2000/- |

Cash/Local Cheque/may be drawn in favor of **"Indian Academy of Pediatrics Delhi"** payable at New Delhi.

*For office use only*

| Payment Details Received | | Rupees | | | | | |
|---|---|---|---|---|---|---|---|
| by Cash/Local Cheque/DD No | | Date | | Bank | | | |
| Receipt No | | Date | General Secretary/ Treasurer | | | | |

Note: Please submit self-attested photocopies of Qualification & Registration Certificate & One Passport size photograph.

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# Central IAP Membership Form

| Personal Details | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Applicant | | | | | | | | | | | | |
| | (Surname) | | | | | | | | (First Name) | | (Middle Name) | |
| Date of Birth | | | | | | | | | Sex: Male / Female | | | |
| Complete Postal Address for Communications | | | | | | | | | | | | |
| City | | Postal Pin | | | | State | | | | Nationality | | |
| Registered Mobile No | | | | | | Alternate Mobile | | | | | | |
| Registered Email | | | | | | Alternate Email | | | | | | |
| IAP State Branch | | | | | | IAP Dist./City/Local Branch | | | | | | |

| Qualification | | | |
|---|---|---|---|
| Medical / Pediatric Qualification | Name of the University | Qualifying Year | Registration with State Medical Council or Medical Council of India |
| | | | |
| | | | |
| | | | |
| | | | |

| Other Details | | | | | |
|---|---|---|---|---|---|
| IAP membership no. and name of the Proposer | | | | | |
| | | | | | Signature |
| IAP membership no. and Name of the Seconder | | | | | |
| | | | | | Signature |
| Place | | | | | |
| Date | | (Signature of the Applicant) (Use black ink pen) | | | |

Please provide following information for IAP Photo Identity Card. Please attach a stamp size photograph (3x2.5 cms) with this application.

| | | | | | |
|---|---|---|---|---|---|
| Doctor's Name | | Mobile No | | Blood Group | |
| Allergies | | Emergency Medications | | | |

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# IAP Membership Privileges

## The Society provides-

- *Facilities to Students, Scholars and Institutions for the study of or Research in Pediatrics in any of its aspects by way of scholarships, fellowships, grants, endowments, etc.*
- *Either through itself or in cooperation with other bodies or persons fellowships, prizes, certificates, diplomas of proficiency in the science of Pediatrics and conduct such tests, examinations or other scrutiny as may be prescribed from time to time.*
- *Free of cost or at subsidized cost its official journals, books, periodicals or publications on pediatrics and allied subjects which the society thinks is desirable for the promotion of its objects.*
- *Opportunity to its member to participate in Conferences, Lectures, Meetings, Seminars, Symposia, Workshops, Continuing Medical Education Programs, etc.*
- *Opportunity to become members of its Branches / Subspecialty Chapters / Groups / Cells / Committees.*

## Affiliations / Collaboration-

*The Society is affiliated to:*

*i* International Pediatric Association (IPA)
*ii* International Society of Tropical Pediatrics (ISTP)
*iii* American Academy of Pediatrics (AAP)
*iv* Asian Pacific Pediatric Association (APPA)
*v* Asian Society for Pediatric Infectious Disease (ASPID)
*vi* South Asia Pediatric Association (SAPA)
*vii* Royal College of Pediatrics and Child Health (RCPCH)

## Categories of Membership-

1 ***Life Member**: Life Membership is granted to any person who is a residential Indian citizen possessing MBBS or equivalent degree in Modern Medicine recognized by Medical Council of India (MCI) and is holding a diploma/degree in pediatrics (such as MD Ped., DNB Ped., DCH) recognized by Medical Council of India (MCI) or any equivalent Nation Statutory Body formed by Government of India.*

2 ***Associate Life Member** is granted to any person possessing MBBS or equivalent degree recognized by Medical Council of India (MCI) or any equivalent National Statutory Body formed by Government of India.*

## How to Apply for Membership-

*Application should be made in the prescribed form. Along with the application for membership of IAP, photo copies of the following documents should be submitted-*

- *Photo copies of the M.B.B.S. & Post Graduation Certificates as (as per degrees listed in your application).*
- *Photo copies of the degrees registration certificates with State Medical Council OR Medical Council of India (as the case may be).*
- *ID Proof with Photo : Aadhar Card / Passport / Voter ID / PAN Card*

## Membership Fee-

*The Membership Fee Structure is as follows:*

| *Category of Membership* | *Admission Fee* | *Membership Fee* | *Total Amount Payable* |
|---|---|---|---|
| *Life* | ₹ **500**/- | ₹ **9,500**/- | ₹ **10,000**/- |
| *Associate Life* | ₹ **500**/- | ₹ **9,500**/- | ₹ **10,000**/- |

*The Membership Fee should be paid by a crossed bank draft / at par cheque drawn in favor of*
***"INDIAN ACADEMY OF PEDIATRICS"** payable at Mumbai or NEFT.*
*Bank details:* **BANK OF BARODA**, *Branch-Juinagar, Navi Mumbai*
*IFSC Code:* **BARB0JUINAG** *(Fifth character is Zero) '*
*Current A/c No.***42080200000253**.

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# Gallery



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*https://goo.gl/maps/dKdTWskyS56RCVka8*