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Hong Kong Society *of*
PAEDIATRIC RESPIROLOGY AND ALLERGY

APPS
ASIAN PAEDIATRIC PULMONOLOGY SOCIETY

11th APPS ANNUAL SCIENTIFIC CONGRESS

in conjunction with

29th HKSPRA ANNUAL SCIENTIFIC MEETING

30 OCT – 1 NOV 2026 • Hong Kong



Towards Best Respiratory Health

E-Programme Book

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FIRST ANNOUNCEMENT

12th Asian Paediatric Pulmonology Society Annual Scientific Congress

in conjunction with the 48th MPA Annual Congress (APPS 2027)

DATE
21 – 23 OCT 2027

VENUE
SHANGRI-LA KUALA LUMPUR

ABSTRACT SUBMISSION CLOSING
31ST JULY 2027

EARLY BIRD REGISTRATION CLOSING
31ST AUGUST 2027

PRE-REGISTRATION CLOSING
20TH SEPTEMBER 2027



FROM PREVENTION TO PRECISION:
THE FUTURE OF CHILDREN'S RESPIRATORY HEALTH

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References: 1. O'Byrne PM et al. N Engl J Med 2018; 378: 1865-76. **2.** Bateman ED et al. N Engl J Med 2018; 378: 1877-87. **3.** Beasley R et al. N Engl J Med 2019; DOI: 10.1056/NEJMoa1901963. **4.** Hardy J et al. Lancet 2019; Published online Aug 23, 2019; http://dx.doi.org/10.1016/S0140-6736(19)31948-8. **5.** Kuna P et al. Int J Clin Pract 2007 (May); 61(5): 725 – 36. **6.** Bousquet J et al. Respir Med 2007; 101: 2437 – 46. **7.** Sobieraj DM et al. JAMA 2018; doi: 10.1001/jama.2018.2769. **8.** Symbicort Hong Kong Package Insert. Feb 2021.

Presentation: Budesonide/Formoterol Turbuhaler. **Indications:** In adults and adolescents (12 years and older), for the treatment of asthma, to achieve overall asthma control, including the relief of symptoms and the reduction of the risk of exacerbations. Symptomatic treatment of moderate to severe COPD in adults. **Dosage:** **Asthma** ***1) Symbicort anti-inflammatory reliever therapy (patients with mild disease) 160/4.5 mcg Turbuhaler*** *Adult & Adolescent ≥ 12yr:* 1 inhalations as needed in response to symptoms. If symptoms persist after a few minutes, 1 additional inhalation should be taken. No more than 6 inhalations should be taken on any single occasion. A total daily dose of more than 8 inhalations is normally not needed, however a total daily dose of up to 12 inhalations can be used temporarily. ***2) Symbicort maintenance and reliever therapy*** *Adult & Adolescent ≥ 12yr:* Patients should take 1 inhalation of Symbicort Turbuhaler 160/4.5 mcg as needed in response to symptoms to control asthma. If symptoms persist after a few minutes, 1 additional inhalation should be taken. No more than 6 inhalations should be taken on any single occasion. Recommend maintenance dose is 1 inhalation b.d. and some may need 2 inhalations b.d.. A total daily dose of more than 8 inhalations is normally not needed, however a total daily dose of up to 12 inhalations can be used temporarily. ***3) Symbicort maintenance therapy 160/4.5 mcg Turbuhaler*** *Adult & Adolescent ≥ 12yr:* 1-2 inhalations b.d.. Max daily dose is 4 inhalations. **COPD *160/4.5 mcg Turbuhaler*** *Adult:* 2 inhalations b.d.. Max daily dose is 4 inhalations. **Contraindications:** Hypersensitivity to budesonide, formoterol or lactose. **Precautions:** Should be used for the shortest duration of time required to achieve control of asthma symptoms. Should only be used long-term in patients whose asthma cannot be adequately controlled on asthma controller medications. Not be used to initiate treatment with inhaled steroids in patients being transferred from oral steroids. It is recommended that the maintenance dose be tapered when long-term treatment is discontinued. Potential systemic effects of ICS, HPA axis suppression and adrenal insufficiency, bone density, growth, visual disturbance, infections/tuberculosis, sensitivity to sympathomimetic amines, cardiovascular disorders, hypokalaemia, diabetes, pneumonia, lactose, pregnancy & lactation. Not recommended for children below 12 years of age. Incidence of candidiasis can be minimized by having patients rinse their mouth out with water after inhaling their maintenance dose. **Interactions:** CYP3A4 inhibitors, beta-receptor blocking agents, other sympathomimetic agents, Xanthine derivatives, mineralocorticosteroids and diuretics, Monoamine oxidase inhibitors, tricyclic antidepressants, quinidine, disopyramide, procainamide, phenothiazines and antihistamines. **Undesirable effects:** Palpitations, Candida infections in the oropharynx, headache, tremor, mild irritation in the throat, coughing, hoarseness. **Full local prescribing information is available upon request.** API.HK.SYM.0721

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▲ In infants with a family history of atopic dermatitis.
1. Nicolaou N, et al. The risk reduction effect of a nutritional intervention with a partially hydrolyzed whey-based formula on cow's milk protein allergy and atopic dermatitis in high-risk infants within the first 6 months of life: The allergy reduction trial (A.R.T.), a multicenter double-blinded randomized controlled study. *Front Nutr.* 2022;9:863599.
2. Bohn T, et al. Nutritional safety and suitability of a specific protein hydrolysate derived from a whey protein concentrate and used in an infant formula and follow-on formula manufactured from hydrolysed protein by FrieslandCampina Nederland B.V. *EFSA Journal* 2023;21(7):8063.
3. Kantaras P, et al. Growth and gut comfort of healthy term infants exclusively fed with a partially hydrolysed protein-based infant formula: A randomized controlled double-blind trial. *Front Pediatr.*2024;12:1328709.

Breastfeeding is the best nutrition for healthy growth and development of babies. Exclusive breastfeeding for 6 months is the optimal way of feeding infants. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years or beyond. Mothers should receive guidance on proper maternal nutrition in order to help sustain an adequate supply and quality of breast milk. Unnecessary introduction of bottle feeding, partially or fully, or of other complementary foods and drinks may have a negative impact on breastfeeding, which may be irreversible. Mothers should consult their doctor and consider the social and financial implications before deciding to use breast milk substitutes or if they have difficulty breastfeeding. Usage, preparation and storage instructions of breast milk substitutes or of other complementary foods and drinks should be followed carefully as improper or unnecessary use may pose a health hazard.

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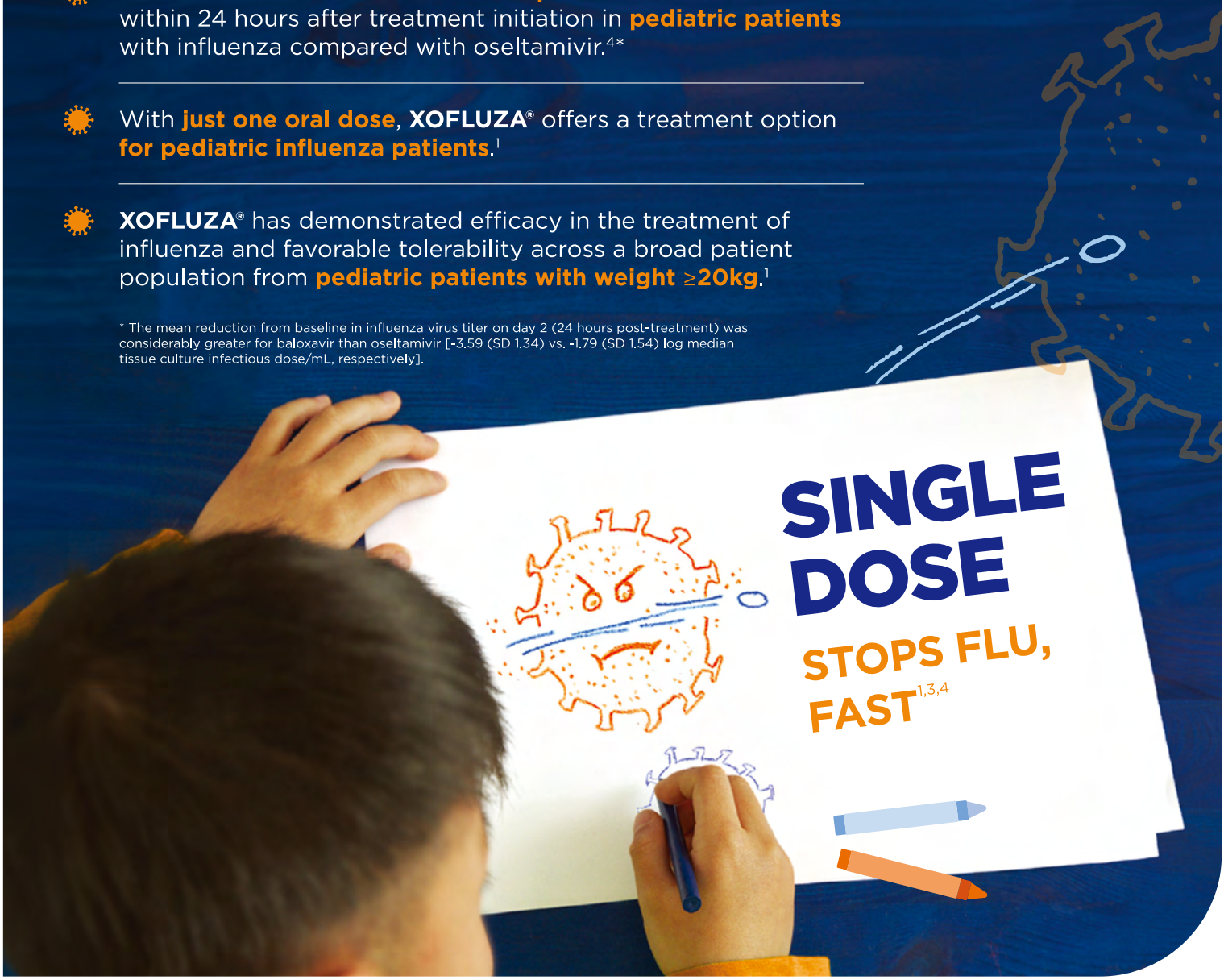
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Study Design[4]: MiniSTONE-2 was a randomized, double-blind, active-controlled study conducted in children aged 1 to <12 years with clinically diagnosed influenza. Mean weight 26.1 kg in Baloxavir group 28.1 kg in Oseltamivir group. Median weight is 23.3 kg in Baloxavir group and 23.78 kg in Oseltamivir group. Participants were randomized in a 2:1 ratio to receive either a single oral dose of baloxavir marboxil or oral oseltamivir twice daily for 5 days. The primary endpoint evaluated the incidence, severity, and timing of adverse events. Efficacy was assessed as a secondary endpoint. Adverse events were reported in 48.6% of participants overall. The incidence of adverse events was comparable between the baloxavir and oseltamivir groups (46.1% vs. 53.4%). No deaths, serious adverse events, or hospitalizations were reported. Median time to alleviation of influenza signs and symptoms was similiar between treatment groups: 138.1 (116.6-163.2) hours with baloxavir versus 150.0 (115.0-165.7) hours with oseltamivir.

References: 1. Xofluza® Prescribing Information (version 2026.07). **2.** Hayden FG, Sugaya N, Hirotsu N, et al. *Baloxavir Marboxil for Uncomplicated Influenza in Adults and Adolescents.* N Engl J Med. 2018;379(10):913-923. **3.** Ison MG, et al. *Early Treatment with Baloxavir Marboxil in High-Risk Adolescent and Adult Outpatients with Uncomplicated Influenza (CAPSTONE-2).* Lancet Infect Dis. 2020; 20:1204-1214. **4.** Baker J, et al. *Baloxavir Marboxil Single-Dose Treatment in Influenza-Infected Children: A Randomized, Double-Blind, Active-Controlled Phase 3 Safety and Efficacy Trial (miniSTONE-2).* Pediatr Infect Dis J. 2020;39(8):700-705.

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Welcome Message

Dear Colleagues, Distinguished Guests, and Friends,

On behalf of the Asian Paediatric Pulmonology Society (APPS), it is my great pleasure to welcome you to the 11th APPS Annual Scientific Congress, held in conjunction with the 29th Hong Kong Society of Paediatric Respirology (HKSPRA) Annual Scientific Meeting in Hong Kong on 30 Oct – 1 Nov 2026.

This congress provides a valuable opportunity for paediatric respiratory specialists and colleagues from across Asia and beyond to come together, share knowledge, exchange experiences, and discuss advances in the prevention, diagnosis, and management of respiratory diseases in children. Through scientific discussions and professional collaboration, we can strengthen our collective efforts to improve respiratory health outcomes for children in our region.

I would like to express my sincere appreciation to HKSPRA for hosting this joint congress and to the organising committee, speakers, moderators, and all colleagues who have contributed their time and expertise to making this scientific gathering possible.

As we continue to face evolving challenges in paediatric respiratory health, collaboration across countries and disciplines remains essential. I hope this congress will not only enrich our knowledge and clinical practice but also foster lasting partnerships, inspire new ideas, and strengthen the APPS community.

Thank you for being part of this important gathering. I wish you all a productive and enjoyable congress, and hope you have the opportunity to experience the wonderful city of Hong Kong during your stay.

Warm regards,



Dr. Rina Triasih, MD, M.Med (Paed), PhD
President
Asian Paediatric Pulmonology Society (APPS)

Welcome Message

Dear Colleagues, Distinguished Guests, and Friends,

It is my distinct privilege and greatest pleasure to welcome you all to the "11th APPS Annual Scientific Congress in conjunction with 29th HKSPRA Annual Scientific Meeting", held from 30 October to 1 November 2026 at the Cordis, Hong Kong. This joint congress brings together two prestigious organizations – the Asian Paediatric Pulmonology Society (APPS) and the Hong Kong Society of Paediatric Respirology and Allergy (HKSPRA) – under a unified mission: "Toward Best Respiratory Health".

Over the next three days, our comprehensive scientific programme will cover a broad spectrum of cutting-edge topics in paediatric pulmonology, allergy, sleep medicine, and critical care. We have lined up an exceptional array of parallel workshops – including specialized sessions on paediatric airway interventions – alongside oral and e-poster presentations showcasing the latest regional research.

Beyond the robust clinical and scientific updates, this congress serves as an invaluable platform to renew old friendships, forge new collaborations, and exchange professional practices with leading experts and peers from across the globe.

We hope you find the scientific sessions highly stimulating and your time in the vibrant city of Hong Kong truly memorable.

Thank you for your continued dedication to advancing paediatric respiratory care.

Warm regards,



Dr. Wa-Keung Chiu, MBBS (HK), FHKCPaed, FRCPCH
President
Hong Kong Society of Paediatric Respirology and Allergy (HKSPRA)

Welcome Message

Dear Distinguished Guests, Esteemed Colleagues, International Delegates, and Friends,

Reclaiming the Pearl: Innovation, Global Collaboration, and the Future of Respiratory Health

It is an absolute honor and a profound privilege to stand before you today as we mark the conclusion of a truly historic gathering. I am filled with immense gratitude, deep admiration, and a great sense of pride as I look across this room. First and foremost, I want to extend my heartfelt congratulations to each and every one of you for the monumental success of the 11th APPS Annual Scientific Congress, held in proud conjunction with the 29th HKSPRA Annual Scientific Meeting here in our magnificent city of Hong Kong.

This achievement belongs to all of us. It is the culmination of tireless planning, unwavering dedication, and an uncompromising commitment to the advancement of paediatric and respiratory medicine.

To understand the full weight of this success, we must reflect on where we have been. For decades, Hong Kong has shone brightly on the global stage, earning its reputation as the Pearl of the Orient – a vibrant East Asian metropolis defined by its soaring skyline, its boundless energy, and its legendary hospitality. However, we must candidly acknowledge that our light was tested. During the dark and unprecedented days of the COVID-19 outbreak, our city grew less shiny. Our borders closed, our bustling convention halls fell silent, and the warm hospitality that once welcomed the world was replaced by isolation and uncertainty.

But true pearls are formed under pressure. The resilience of our medical community, the determination of our people, and the strength of our enduring global partnerships ensured that we did not stay in the shadows.

Fortunately, we have emerged stronger, wiser, and more united than ever before. This year, under our vital and forward-looking theme, "Towards Best Respiratory Health," we did not merely host a conference; we ignited a movement. As our government actively and aggressively promotes Hong Kong on the global stage, this landmark gathering serves as the ultimate proof that we have officially reclaimed our identity. We are, without a doubt, Asia's Event Capital.

This triumphant return was not achieved in isolation. This vibrant revival was possible only with your unwavering global and APPS support. When the world faced a crisis of breath, you reminded us of the power of shared knowledge.

The sheer scale, depth, and diversity of this congress speak volumes about our collective recovery. To truly appreciate what we have built together over these past few days, we only need to look at the remarkable statistics of this event. This year, we have successfully brought together over 200 dedicated delegates hailing from more than 19 countries across the globe. We have been challenged, inspired, and enlightened by the insights of over 46 world-class speakers representing 5 continents, creating a truly global tapestry of medical expertise.

Welcome Message

Furthermore, our scientific program has broken new ground, showcasing 15 groundbreaking oral presentations and over 100 high-caliber E-posters that push the boundaries of clinical research. This is, of course, entirely separate from the many important, innovative, and eye-catching workshops that provided our clinicians with invaluable, hands-on masterclasses in cutting-edge respiratory care.

By bringing the world's brightest minds back to our shores, you have done more than just share data. You have revitalized our local scientific ecosystem, inspired a new generation of medical professionals, and permanently restored the brilliant shine to Hong Kong. You have proven that our shared commitment to human health and medical progress knows no geographic boundaries, no political borders, and no limitations.

To our international visitors who travelled across oceans and continents to be here: thank you for your trust, thank you for your presence, and thank you for standing shoulder-to-shoulder with Hong Kong. To our local organizing committees, the leadership of APPS, and the visionary teams at HKSPRA: thank you for your relentless, exhausting, and flawless execution of this event.

As we officially close this phenomenal chapter, let the overwhelming success of this joint congress serve as a permanent reminder of our potential. We have proven that when the global medical community unites with a shared purpose, we can overcome any adversity. Let us carry the knowledge gained, the friendships forged, and the inspiration sparked here back to our respective clinics, universities, and hospitals worldwide. Together, we will continue our march Towards Best Respiratory Health for every child and every community.

Thank you, congratulations once again to everyone involved, and I wish you all a safe journey home and continued success in your vital work.

Please check the stats quoted are the most current.

Warm regards,



Dr. Ellis Kam-Lun Hon, MBBS (UWA), MD (CUHK)
Chairman, Organizing Committee
11th APPS Annual Scientific Congress in conjunction with
29th HKSPRA Annual Scientific Meeting

Organizers

Asian Paediatric Pulmonology Society
https://www.appuls.org

The Asian Paediatric Pulmonology Society (APPS) is a professional organization established in 2014 by paediatric pulmonologists across Asia, dedicated to improve the care of children with respiratory diseases, which continue to pose a significant health burden across the region despite its diverse cultural, geographic, and resource settings. As a collaborative regional platform, APPS brings together clinicians, educators, and researchers to promote excellence in paediatric respiratory medicine through capacity building, knowledge exchange, and academic leadership. The Society advances its mission through flagship initiatives including its annual scientific congress, the Pediatric Respirology and Critical Care Medicine (PRCCM) journal, the APPS Grand Round online academic series, and the development of regionally relevant clinical practice guidelines. Through these sustained efforts, APPS strives to lead progress in clinical practice, education, and research, while strengthening professional networks and improving respiratory health outcomes for children across Asia.

Hong Kong Society of Paediatric Respirology and Allergy
http://www.hkspra.org

Respiratory diseases are the commonest diseases affecting children as well as being the commonest cause of serious life-threatening diseases requiring intensive care in the world. With the aim of promoting the practice of paediatric respirology in Hong Kong, the Hong Kong Society of Paediatric Respirology (HKSPR), a registered charitable organization, was founded in 1997 to promote the development of paediatric respiratory medicine and critical care. On 25 June 2015, it was officially renamed as “Hong Kong Society of Paediatric Respirology and Allergy” to reflect the scope of the Society as allergy is an important component in paediatric respiratory medicine. The society is committed to maintaining and improving the quality of diagnostic and treatment services for paediatric respiratory and allergic diseases in Hong Kong. The office bearers and council members have been working hard to promote the works of the Society. We have around 220 members, they include doctors and allied-health professionals (paediatric nurses, physiotherapists, pharmacists, etc). Each year, we organise our Annual Scientific Meeting in October/November. There are other special workshops (eg Allergy Workshop, Asthma Workshop, Bronchoscopy Course, Lung Function Workshop, NIV Workshop, Sleep Course, etc) we organise from time to time. HKSPRA publishes a journal “Pediatric Respirology and Critical Care Medicine” jointly with Asian Paediatric Pulmonology and Society & Society of Pediatric Pulmonology, Taiwan from Jan 2017. The Journal is open access journal indexed in DOAJ and no fee is charged to authors. It is published quarterly.

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- Dr. Alfred YC Tam (Private Practice)

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- Dr. Citra Cesilia (Indonesia)
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- Prof. Basil Elnazir (Ireland)
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- Dr. Judith JM Wong (Singapore)

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- Prof. Abid Hossain Mollah (Bangladesh)
- Prof. Ashkan Moslehi (Kuwait)
- Prof. Leyla Namazova-Barabova (Russia)
- Prof. Anna Nathan (Malaysia)
- Dr. Daniel Ng (Hong Kong Sanatorium and Hospital)
- Assoc. Prof. Nguyen Phung (Vietnam)
- Prof. Aroonwan Preutthipan (Thailand)
- Prof. Kun-Ling Shen (China)
- Dr. Ka-Ka Siu (The University of Hong Kong)
- Prof. Wen-Jue Soong (Taichung City, Taiwan)
- Prof. Dong In Suh (South Korea)
- Dr. Bambang Supriyatno (Indonesia)
- Prof. Sarabon Tahura (Bangladesh)
- Dr. Oon-Hoe Teoh (Singapore)
- Dr. Rina Triasih (Indonesia)
- Dr. Michelle YP Tsang (United Christian Hospital)
- Dr. Gerry MF Yeung (Hong Kong Adventist Hospital – Tsuen Wan)
- Dr. Dingle Yu (China)

The Organizing Committee would like to extend their deepest appreciation to the speakers and chairpersons for their active participations in the "11th APPS Annual Scientific Congress in conjunction with 29th HKSPRA Annual Scientific Meeting".

Academic Accreditations

30 Oct 2026: Pre-Congress Workshops

College / Association	Points Accredited				
	Workshop 1 (10:00-17:00)	Workshop 2 (10:00-17:00)	Workshop 3 (10:00-17:00)	Workshop 4 (10:00-17:00)	Group-Category
CME					
Hong Kong College of Paediatricians	5	5	5	5	A-PP
Hong Kong College of Anaesthesiologists	5	5	5	5	RC-NA
Hong Kong College of Community Medicine	5	5	5	5	PP-PP
Hong Kong College of Emergency Medicine	5	5	5	5	CME-PP
Hong Kong College of Family Physicians	5	5	5	5	OEA-5.02
Hong Kong College of Obstetricians and Gynaecologists	5	5	5	5	PP-PN
Hong Kong College of Orthopaedic Surgeons	N/A	N/A	N/A	N/A	N/A
Hong Kong College of Otorhinolaryngologists	2.5	2.5	2.5	2.5	PP-2.2
Hong Kong College of Pathologists	5	5	5	5	CME-PP
Hong Kong College of Physicians	2.5	2.5	2.5	2.5	PP-PP
Hong Kong College of Psychiatrists	5	5	5	5	PP-OP
Hong Kong College of Radiologists	5	5	5	5	B-PP
College of Dental Surgeons of Hong Kong	Pending	Pending	Pending	Pending	Pending
College of Surgeons of Hong Kong	5	5	5	5	CME-PP
Medical Council of Hong Kong	5	5	5	5	CME-PASSIVECME
CNE					
Hong Kong Paediatric Nurses Association	AM: 2 PM: 2.5	AM: 2.5 PM: 2	AM: 2.5 PM: 2	AM: 2.5 PM: 2	
CPD					
Hong Kong Physiotherapy Association	Pending	Pending	Pending	Pending	Pending

The final accreditation will be at the discretion of the individual College/Association.

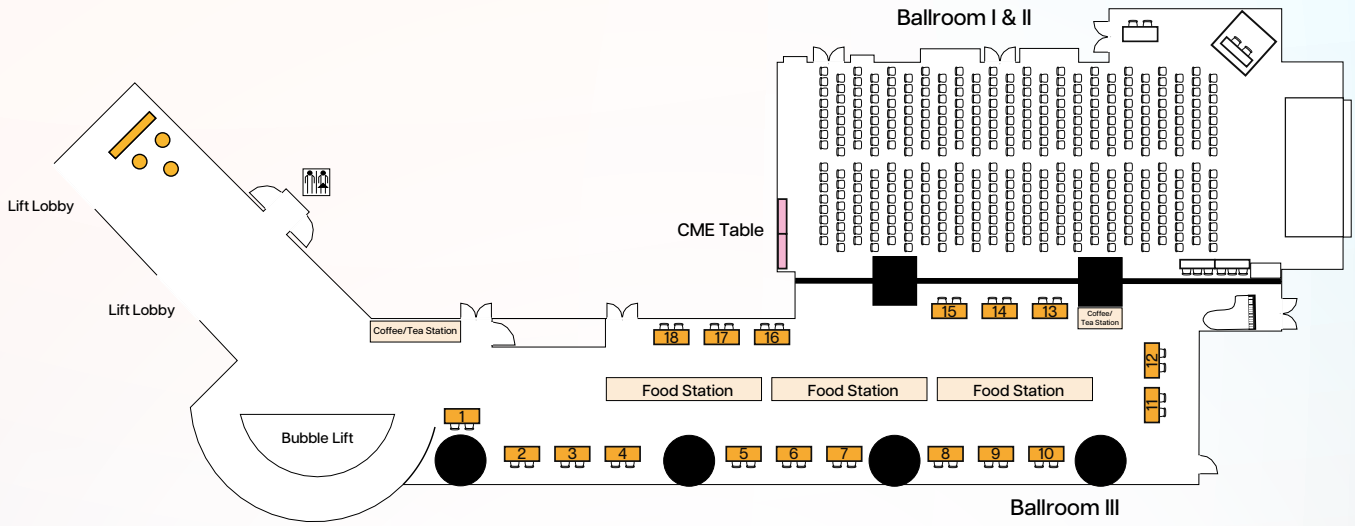
Academic Accreditations

31 Oct - 1 Nov 2026: Main Congress

College / Association	Points Accredited			
	Max. for whole function	31 Oct (09:00-17:15)	1 Nov (08:00-17:00)	Group-Category
CME				
Hong Kong College of Paediatricians	17	6	6	A-PP
Hong Kong College of Anaesthesiologists	15	6	7	RC-NA
Hong Kong College of Community Medicine	10	6	6	PP-PP
Hong Kong College of Emergency Medicine	12	5.5	6	CME-PP
Hong Kong College of Family Physicians	10	5	5	OEA-5.02
The Hong Kong College of Obstetricians and Gynaecologists	5	5	5	PP-PN
Hong Kong College of Orthopaedic Surgeons	N/A	N/A	N/A	N/A
Hong Kong College of Otorhinolaryngologists	9	3	3.5	PP-2.2
Hong Kong College of Pathologists	18	6	7	CME-PP
Hong Kong College of Physicians	8.5	3	3	PP-PP
Hong Kong College of Psychiatrists	16.5	5.5	6.5	PP-OP
Hong Kong College of Radiologists	17	5.5	6.5	B-PP
College of Dental Surgeons of Hong Kong	Pending	Pending	Pending	Pending
College of Surgeons of Hong Kong	17	6	6	CME-PP
Medical Council of Hong Kong	10	5	5	CME-PASSIVECME
CNE				
Hong Kong Paediatric Nurses Association		AM: 2.5 PM: 1	AM: 3.5 PM: 2	
CPD				
Hong Kong Physiotherapy Association	Pending	Pending	Pending	Pending

The final accreditation will be at the discretion of the individual College/Association.

List of Exhibitors and Location



Location: Ballroom Foyer, 7/F., Cordis Hong Kong

Location	Exhibitors
1	Malaysian Paediatric Association
2	Fisher & Paykel Healthcare
3	Mead Johnson Nutrition (Hong Kong) Ltd.
4	DKSH Hong Kong / Roche Hong Kong
5	bioMerieux China
6	HIPP Hong Kong
7	Sanofi Hong Kong
8	AstraZeneca Hong Kong
9	Pfizer Corporation Hong Kong
10	Masimo Hong Kong
11 & 12	Danone Nutricia
13	Viatris Healthcare Hong Kong
14	Abbott Laboratories
15	Rxilient Medical (Hong Kong)
16	Zuellig Pharma
17	Sino-Asia Pharmaceutical Supplies
18	Zenfields (HK)

Programme

30 Oct 2026 (Friday) (Room: Shanghai I, 8/F)

Parallel Workshop 1
Paediatric Airway Interventions by Flexible Bronchoscopy

Chairpersons: Prof. Ashkan Moslehi and Prof. Wen-Jue Soong

09:30 – 10:00	**Registration**
10:00 – 10:10	**Welcome and Introduction** *Prof. Wen-Jue Soong, Taichung City, Taiwan*
10:10 – 10:35	**Airway Mapping: From Images to Bronchoscopy** *Prof. Ashkan Moslehi, Kuwait*
10:35 – 11:00	**Airway Foreign Bodies: Management by Flexible Bronchoscopy** *Dr. An-Xia Jiao, Beijing, China*
11:00 – 11:25	**Flexible Bronchoscopy-Guided Cryotherapy and Thermoablation in Children** *Prof. Sarabon Tahura, Bangladesh*
11:25 – 11:50	**Paediatric Airway Stenting** *Prof. Ashkan Moslehi, Kuwait*
11:50 – 12:15	**Anesthetic/Sedation for Interventional Bronchoscopy: Oxygenation and Ventilation Support** *Prof. Wen-Jue Soong, Taichung City, Taiwan*
12:15 – 12:30	**Wrap Up and Introduction of Hands-on Workshop** *Prof. Ashkan Moslehi, Kuwait*
12:30 – 14:00	**Lunch Break** (self-arrangement)
14:00 – 16:30	**Hands-on Stations** **Station 1: Foreign Body Retrieval** *Dr. An-Xia Jiao, Beijing, China* **Station 2: APC / Cryo** *Prof. Sarabon Tahura, Bangladesh* **Station 3: Ballon Dilatation** *Prof. Ashkan Moslehi, Kuwait* **Station 4: Soong's Ventilation** *Prof. Wen-Jue Soong, Taichung City, Taiwan*
16:30 – 17:00	**Question and Answer** *Whole Faculty*

Programme

30 Oct 2026 (Friday) (Room: Shanghai II, 8/F)

Parallel Workshop 2
Cystic Fibrosis: From Zero to 100+

Chairpersons: Assoc. Prof. Hussein Al Kindi and Dr. Ka-Ka Siu

09:30 – 10:00	**Registration**
10:00 – 10:10	**Welcome and Introduction** *Assoc. Prof. Hussein Al Kindi, Oman*
10:10 – 10:35	**CF: Making Diagnosis** *Prof. Sushil Kabra, India*
10:35 – 11:00	**How Intensively should we Identify and Treat Respiratory Infections in Cystic Fibrosis?** *Prof. Bulent Karadag, Turkey*
11:00 – 11:25	**Nebulizer Therapy** *Dr. Ka-Ka Siu, Hong Kong SAR*
11:25 – 11:50	**CFTR Modulators in Asia** *Prof. Sushil Kabra, India*
11:50 – 12:15	**Nutritional Support in Cystic Fibrosis** *Assoc. Prof. Harutai Kamalaporn, Thailand*
12:15 – 12:40	**Contemporary Airway Clearance Technologies: A Workshop on Vest Machine, Aerobika, and Cough Assist Devices** *Ms. Brigitte KY Fung, Hong Kong SAR*
12:40 – 12:55	**Wrap Up and Introduction of Hands-on Workshop** *Assoc. Prof. Hussein Al Kindi, Oman*
12:55 – 14:25	**Lunch Break** (self-arrangement)
14:25 – 16:30	**Hands-on Stations** *Sponsors: Celki and Medwell* **Station 1: Sweat Test** *Prof. Sushil Kabra, India and Prof. Bulent Karadag, Turkey* **Station 2: Aquagenic Winkling** *Prof. Sushil Kabra, India* **Station 3: Airway Clearance** *Ms. Brigitte KY Fung, Hong Kong SAR and Ms. Rebecca SY Wong, Hong Kong SAR* **Station 4: Inhalation Therapy** *Dr. Ka-Ka Siu, Hong Kong SAR*
16:30 – 17:00	**Question and Answer** *Whole Faculty*

Programme

30 Oct 2026 (Friday) (Room: Shantung, 8/F)

Parallel Workshop 3
Lung Function: Tidal to Force

Chairpersons: Prof. Anne Goh and Dr. Michelle YP Tsang

09:30 – 10:00	**Registration**
10:00 – 10:10	**Welcome and Introduction** *Prof. Anne Goh, Singapore*
10:10 – 10:35	**Incentive Spirometry in Children** *Prof. Basil Elnazir, Ireland*
10:35 – 11:00	**Forced Oscillation Technique in the Lung Function Laboratory: From Principles to Practical Application** *Dr. Michelle YP Tsang, Hong Kong SAR*
11:00 – 11:25	**Challenge Tests in Lung Function** *Prof. Anne Goh, Singapore*
11:25 – 11:50	**Diffusion Capacity** *Prof. Gerald Loughlin, USA*
11:50 – 12:15	**Demystifying the Body Box** *Prof. Anna Nathan, Malaysia*
12:15 – 12:40	**FeNo Measurement in the Lung Function Laboratory: From Technical Principles to Hands-on Practice** *Dr. Michelle YP Tsang, Hong Kong SAR*
12:40 – 12:55	**Wrap Up and Introduction of Hands-on Workshop** *Dr. Michelle YP Tsang, Hong Kong SAR*
12:55 – 14:25	**Lunch Break** (self-arrangement)
14:25 – 16:30	**Hands-on Stations** **Station 1: Incentive Spirometry** *Prof. Basil Elnazir, Ireland* *Sponsor: Prism Technologies* **Station 2: FOT** *Dr. Michelle YP Tsang, Hong Kong SAR* *Sponsor: Prism Technologies* **Station 3: FeNo** *Ms. Chiu-Wing Tsang, Hong Kong SAR and Ms. Tin-Yan Li, Hong Kong SAR* *Sponsor: Prism Technologies* **Station 4A: Nasal NO and Offline No** **Station 4B: Mouth and Nasal Pressure Measurements** *Prof. Anna Nathan, Malaysia* *Sponsor: Getz Healthcare* **Station 5: Challenge Tests in Lung Function** *Prof. Anne Goh, Singapore*
16:30 – 17:00	**Question and Answer** *Whole Faculty*

Programme

30 Oct 2026 (Friday) (Room: Star I, 42/F)

Parallel Workshop 4
Ventilators Optimization: PICU Transport to Home

Chairpersons: Dr. Karen KY Leung and Prof. Aroonwan Preutthipan

09:30 – 10:00	**Registration**
10:00 – 10:10	**Welcome and Introduction** *Dr. Karen KY Leung, Hong Kong SAR*
10:10 – 10:30	**Pathophysiology of Respiratory Insufficiency** *Dr. Ellis KL Hon, Hong Kong SAR*
10:30 – 10:50	**Acute Non-invasive Ventilation in Children: A Structured, ICEMAN-Based Approach to Safe Initiation** *Dr. Manu Sundaram, Qatar*
10:50 – 11:10	**Invasive Ventilation: The Right Strategy** *Dr. Judith JM Wong, Singapore*
11:10 – 11:30	**Apnoeic Oxygenation for Intubation** *Prof. Andreas Schibler, Australia*
11:30 – 11:40	**Break**
11:40 – 12:00	**Ventilation during Critical Care Transport** *Dr. Karen KY Leung, Hong Kong SAR*
12:00 – 12:20	**Neurally Adjusted Ventilatory Assist: A Physiological Lens on the Power–Load–Drive Triad of Respiratory Failure in Children with Neuromuscular Disease** *Dr. Manu Sundaram, Qatar*
12:20 – 12:40	**Troubleshooting Paediatric NIV: A Case-based Practical Approach** *Prof. Aroonwan Preutthipan, Thailand*
12:40 – 13:00	**Tracheostomy – Optimal Home Care Strategies** *Ms. Sheila Kun, USA*
13:00 – 13:05	**Wrap Up and Introduction of Hands-on Workshop** *Dr. Karen KY Leung, Hong Kong SAR*
13:05 – 14:05	**Lunch Break** (self-arrangement)
14:05 – 14:25	**Video Lecture: High Velocity Therapy in Paediatric Respiratory Care: From Mechanism to Bedside** *Dr. Theresa Schultz, USA*
14:25 – 14:30	**Break**
14:30 – 16:35	**Hands-on Stations** **Station 1: Invasive Ventilation and NAVA** *Dr. Judith JM Wong, Singapore* *Sponsor: Getinge* **Station 2: NIV Set Up and Troubleshooting** *Dr. Ellis KL Hon, Hong Kong SAR and Dr. Manu Sundaram, Qatar* *Sponsors: Celki and Legend Master*

	Station 3: Transport Ventilation *Ms. Josephine MY Cheung, Hong Kong SAR, Dr. Karen KY Leung, Hong Kong SAR and Prof. Andreas Schibler, Australia* *Sponsors: Fisher and Paykel, Getz Healthcare and Legend Master* **Station 4: Home Ventilation** *Ms. Sheila Kun, USA and Prof. Aroonwan Preutthipan, Thailand* *Sponsors: Celki and Medwell*
16:30 – 17:00	**Question and Answer** *Whole Faculty*

Programme

31 Oct 2026 (Saturday)

08:00	**Registration**		
09:00 – 09:30	**Opening Ceremony**		
	Keynote Lecture 1 and 2 Room: Ballroom, 7/F *Chairpersons: Dr. Wa-Keung Chiu and Prof. Stephen Graham*		
09:30 – 10:10	**Paediatric Pulmonary Tuberculosis Guideline – 2026 Based on APPS Clinical Guidance for Paediatric Tuberculosis** *Prof. Varinder Singh, India*		
10:10 – 10:50	**Asthma Management 2026** *Prof. Basil Elnazir, Ireland*		
10:50 – 11:00	**Question and Answer**		
11:00 – 11:30	**Coffee Break**		
	Parallel Symposium 1 **Asthma** Room: Ballroom, 7/F *Chairpersons:* *Prof. Jessie de Bruyne and* *Prof. Abid Hossain Mollah* 11:30 – 12:00 **Managing Paediatric Asthma and Wheezing in the Light of GINA 2026 Guidelines** *Dr. Alfred YC Tam, Hong Kong SAR* *(Lecture sponsored by AstraZeneca)* 12:00 – 12:30 **Climate Change and Tunderstorm Asthma in Children: Challenges and Responses** *Prof. Kun-Ling Shen, Beijing & Shenzhen, China* 12:30 – 13:00 **Real-World Outcomes of Dupilumab in Children with Multiple Allergic Diseases** *Prof. Julia Levina, Russia* 13:00 – 13:15 **Question and Answer**	**Parallel Symposium 2** **Mahesh Babu Ramamurthy Memorial** Room: Shanghai, 8/F *Chairpersons:* *Prof. Shakil Ahmed and* *Dr. Daniel KK Ng* 11:30 – 12:00 **Hypoxic Burden – Is it Ready for Use in Childhood Obstructive Sleep Apnoea?** *Prof. Albert MC Li, Hong Kong SAR* 12:00 – 12:30 **Dental Intervention for Childhood Obstructive Sleep Apnoea – What is the Longer-term Outcome?** *Dr. Michael TK Chao, Hong Kong SAR* 12:30 – 13:00 **Phenotyping Childhood Obstructive Sleep Apnoea Syndrome – A New Standard?** *Dr. Chien-Heng Lin, Taichung City, Taiwan* 13:00 – 13:15 **Question and Answer**	**Parallel Symposium 3** **Technology Dependent Children** Room: Shantung, 8/F *Chairpersons:* *Prof. Bulent Karadag and* *Dr. Cheng Lei* 11:30 – 11:50 **Rewriting the Natural History: Respiratory Care in SMA and Duchenne in the Era of Genetic Therapies** *Prof. Omendra Narayan, UAE* 11:50 – 12:10 **Transition to Invasive to Non-invasion Ventilation: When and How** *Prof. Aroonwan Preutthipan, Thailand* 12:10 – 12:30 **Hospital to Home Ventilation** *Dr. Ka-Ka Siu, Hong Kong SAR* 12:30 – 12:50 **Common Mistakes, Unmet Needs and Adaptation at Home: Unknown to Hospital Staff** *Ms. Sheila Kun, USA* 12:50 – 13:15 **Question and Answer**

13:15 – 14:00	**Lunch Break**		
	Parallel Free Paper Oral Presentation 1 Room: Ballroom, 7/F *Chairpersons:* *Dr. David SY Lam and* *Dr. Rina Triasih*	**Parallel Free Paper Oral Presentation 2** Room: Shanghai, 8/F *Chairpersons:* *Dr. Daniel WT Ko and* *Prof. Anna Nathan*	**Parallel Free Paper Oral Presentation 3** Room: Shantung, 8/F *Chairpersons:* *Prof. Majid Al Teneiji and* *Dr. Theresa NH Leung*
	14:00 – 14:13 **OSA in Children: Diagnostic, Treatment Outcomes, and PAP Therapy Barriers in Oman** *Assoc. Prof. Hussein Al Kindi, Oman*	14:00 – 14:13 **Predictive Factors for the Development of Obstructive Bronchiolitis in Children with Adenovirus Pneumonia** *Dr. Hoang-Dung Nguyen, Vietnam*	14:00 – 14:13 **Demographic, Clinical Characteristics and Treatment Outcomes of Children with Pre-school Wheeze: A Prospective Cohort Study** *Dr. Jia-Jian Tang, Malaysia*
	14:15 – 14:28 **Extracorporeal Life Support for Severe Paediatric Acute Respiratory Distress Syndrome: A Single-Centre Case Series** *Dr. Matthew Lam, Hong Kong SAR*	14:15 – 14:28 **Respiratory Function in Ambulant Boys with Duchenne Muscular Dystrophy Undergoing Micro-dystrophin Gene Therapy: A Single-Centre Observational Study from the UAE** *Dr. Yasmin Mahfouz, United Arab Emirates*	14:15 – 14:28 **Three Decades of Journey: Long-Term Efficacy and Safety of Balloon Expandable Metallic Stents (BEMS) in Paediatric Tracheobronchial Narrowing** *Dr. Soo-Hong Tan, Taichung City, Taiwan*
	14:30 – 14:43 **Factors Associated with Failure of Pigtail Chest Drainage in Paediatric Parapneumonic Effusion: A 10-Year Retrospective Study from Thailand** *Dr. Sarinrath Charoonrochana, Thailand*	14:30 – 14:43 **Diagnostic Utility of Impulse Oscillometry for Mannitol-Induced Airway Hyperresponsiveness in Children** *Dr. Wan-Ching Wong, Hong Kong SAR*	14:30 – 14:43 **Ultrasonographic Assessment of the Diaphragm in Bronchial Asthma Patients and Healthy Controls Aged 3-5 years: A Cross-sectional Study** *Dr. Antero Realista, Philippines*
	14:45 – 14:58 **Clinical Profile of Children with Post-infectious Bronchiolitis Obliterans in Eastern India** *Dr. Saurabh Agarwal, India*	14:45 – 14:58 **Longitudinal Pulmonary Function Outcomes in Patients with Primary Ciliary Dyskinesia: A Real-Life Experience** *Prof. Bulent Karadag, Turkey*	14:45 – 14:58 **Prevalence of Exercise-induced Bronchoconstriction and the Effect of Asthma Control on it among Children with Asthma: Sri Lankan Experience** *Dr. Srimali Wijesundara, Sri Lanka*
	15:00 – 15:13 **Age-Specific Clinical Characteristics of Xpert MTB/RIF-Confirmed Pulmonary Tuberculosis in Children** *Dr. Rini Savitri Daulay, Indonesia*	15:00 – 15:13 **Discovering the Hidden Burden of Bronchiolitis: Prevalence, Misdiagnosis, and Inappropriate Antibiotic Use in Children of Bangladesh** *Prof. Luthful Kabir ARM, Bangladesh*	15:00 – 15:13 **Feasibility, Early Clinical Outcomes, and Safety of Elexacaftor-Tezacaftor-Ivacaftor in Indian Patients with Cystic Fibrosis: A Pilot Study** *Dr. Vishal Vishnuram Samaga, India*
15:15 – 15:45	**Coffee Break**		

	Keynote Lecture 3 and 4 Room: Ballroom, 7/F *Chairpersons: Dr. Regina Canonizado and Dr. Ting-Yat Miu*	
15:45 – 16:25	**What Happens to a Child with Obstructive Sleep Apnoea in Adulthood – Cardiovascular Perspective** *Dr. Kate CC Chan, Hong Kong SAR*	
16:25 – 17:05	**Year in Review: Paediatric Respiratory Medicine** *Prof. Anne Goh, Singapore*	
17:05 – 17:15	**Question and Answer**	
	30th HKSPRA Annual General Meeting Room: Shanghai, 8/F Time: 17:30 – 17:45 (HKSPRA members only)	**13th APPS Annual General Meeting** Room: Shantung, 8/F Time: 17:45 – 18:45 (APPS members only)
19:00 – 22:00	**Congress Dinner** Room: Ballroom, 7/F	

Programme

1 Nov 2026 (Sunday)

07:15	**Registration**		
	Keynote Lecture 5 Room: Ballroom, 7/F *Chairpersons: Dr. Ka-Ka Siu and Prof. Dong In Suh*		
08:00 – 08:40	**Diagnosis and Management in Primary Ciliary Dyskinesia** *Prof. Bulent Karadag, Turkey*		
08:40 – 08:45	**Question and Answer**		
	Parallel Symposium 4 **Respirology** Room: Ballroom, 7/F *Chairpersons:* *Dr. Bambang Supriyatno and Dr. Michelle YP Tsang* 08:45 – 09:15 **Mapping the Vascular Obstruction in the Airway – An Integrated Approach** *Dr. Carol WK Ng, Hong Kong SAR* 09:15 – 09:45 **Management of Central Airway Obstruction in Children** *Prof. Sarabon Tahura, Bangladesh* 09:45 – 10:15 **Heated Humidified High Flow – A Pragmatic Approach** *Prof. Andreas Schibler, Australia* 10:15 – 10:30 **Question and Answer**	**Parallel Symposium 5** **Respiratory Syncytial Virus** Room: Shanghai, 8/F *Chairpersons:* *Assoc. Prof. Nguyen Phung and Dr. Gerry MF Yeung* 08:45 – 09:15 **Protecting Infant from Respiratory Syncytial Virus** *Dr. Kate CC Chan, Hong Kong SAR* *(Lecture sponsored by Sanofi)* 09:15 – 09:45 **Medical Treatment of Respiratory Syncytial Virus Bronchiolitis – Evidences and Controversies** *Dr. Wa-Keung Chiu, Hong Kong SAR* 09:45 – 10:15 **Beyond the Bronchiolitis Season: The Long Shadow of Infant Respiratory Syncytial Virus Infection** *Prof. Omendra Narayan, UAE* 10:15 – 10:30 **Question and Answer**	**Parallel Symposium 6** **Cystic Fibrosis** Room: Shantung, 8/F *Chairpersons:* *Dr. Channa de Silva and Prof. Kun-Ling Shen* 08:45 – 09:05 **Overcoming the Diagnosis Challenges** *Prof. Sushil Kabra, India* 09:05 – 09:25 **Cystic Fibrosis – A Tale of 2 Cities** *Assoc. Prof. Harutai Kamalaporn, Thailand and Dr. Ka-Ka Siu, Hong Kong SAR* 09:25 – 09:45 **Achieving Optimal Cystic Fibrosis Management** *Prof. Bulent Karadag, Turkey* 09:45 – 10:05 **Cystic Fibrosis in Chinese Children** *Prof. Li-Wei Gao, Beijing, China* 10:05 – 10:30 **Question and Answer**
10:30 – 11:00	**Coffee Break**		

	Parallel Symposium 7 **Skin and Allergy** Room: Ballroom, 7/F *Chairpersons:* *Prof. Anne Goh and* *Dr. David CK Luk* 11:00 – 11:30 **Topical JAK Inhibitors Changing Dermatology Practice** *Prof. Steven Thng, Singapore* 11:30 – 12:00 **Perinatal and Early Nutritional Determinants of Paediatric Allergic Diseases: Findings from a Russian Cohort Study** *Prof. Kamilla Efendieva, Russia* 12:00 – 12:30 **Integrative Medicine for Childhood Atopic Diseases** *Dr. Ellis KL Hon, Hong Kong SAR* 12:30 – 12:45 **Question and Answer**	**Parallel Symposium 8** **Critical Care Medicine** Room: Shanghai, 8/F *Chairpersons:* *Dr. Karen KY Leung and* *Dr. Oon-Hoe Teoh* 11:00 – 11:30 **A Novel Respiratory Support for Resuscitation: Soong's Ventilation** *Prof. Wen-Jue Soong, Taichung City, Taiwan* 11:30 – 11:50 **Nebulization Therapies in the Critically Ill Children** *Dr. Manu Sundaram, Qatar* 11:50 – 12:10 **Flexible Bronchoscopy Treatment in Airway Hyper-secretion** *Dr. An-Xia Jiao, Beijing, China* 12:10 – 12:30 **Neuromuscular Respiratory Crises and Extubation Failure** *Dr. Judith JM Wong, Singapore* 12:30 – 12:45 **Question and Answer**	**Parallel Symposium 9** **Infectious Diseases** Room: Shantung, 8/F *Chairpersons:* *Assoc Prof. Harutai Kamalaporn and Dr. Dingle Yu* 11:00 – 11:30 **Are Children with Chronic Respiratory Diseases at Risk of Japanese Encephalitis** *Dr. Ellis KL Hon, Hong Kong SAR* *(Lecture sponsored by Zuellig Pharma)* 11:30 – 11:50 **Severe Adenovirus Respiratory Infections – The Possible Treatment** *Prof. Julian WT Tang, UK* 11:50 – 12:10 **Update on Antivirals and Immunomodulatory Treatments for Respiratory Viral Infections** *Prof. Ivan FN Hung, Hong Kong SAR* 12:10 – 12:30 **OM-85: 35 Years of Evidence in Russia** *Prof. Leyla Namazova-Baranova, Russia* 12:30 – 12:45 **Question and Answer**
12:45 – 13:30	**Lunch Break**		

	Parallel Symposium 10 **Respirology** Room: Ballroom, 7/F *Chairpersons:* *Dr. Tammy WY Cheung and Prof. Bulent Karadag* 13:30 – 14:00 **Non-CF Bronchiectasis in Asian Children** *Prof. Sushil Kabra, India* 14:00 – 14:30 **Dysfunctional Swallowing and Respiratory Disease** *Prof. Gerald Loughlin, USA* 14:30 – 15:00 **Treatment of Postinfectious Bronchiolitis Obliterans (PiBO)** *Prof. Anna Nathan, Malaysia* 15:00 – 15:15 **Question and Answer**	**Parallel Symposium 11** **Tuberculosis** Room: Shanghai, 8/F *Chairpersons:* *Dr. Sokchinda Kong and Prof. Leyla Namazova-Baranova* 13:30 – 14:00 **Difficulties and Challenges in the Diagnosis and Treatment of Paediatric Tuberculosis** *Prof. A-Dong Shen, Beijing, China* 14:00 – 14:30 **Sequalae of Pulmonary Tuberculosis in Children** *Dr. Citra Cesilia, Indonesia* 14:30 – 15:00 **Classification and Treatment Strategies of Paediatric Tracheobronchial Tuberculosis** *Dr. An-Xia Jiao, Beijing, China* 15:00 – 15:15 **Question and Answer**	**Parallel Symposium 12** **Common Sleep Medicine** Room: Shantung, 8/F *Chairpersons:* *Dr. Eric YT Chan and Prof. Jessie de Bruyne* 13:30 – 14:00 **Transforming Sleep Care: Digital Approaches to Support Families of Children with Neurodiversity** *Prof. Shirley X Li, Hong Kong SAR* 14:00 – 14:30 **Technological Ways of Dealing with Insomnia in Adolescents** *Dr. Rachel NY Chan, Hong Kong SAR* 14:30 – 15:00 **Paediatric Insomnia: What to Exclude, What to Teach, When to Prescribe** *Dr. Majid Al Teneiji, UAE* 15:00 – 15:15 **Question and Answer**
15:15 – 15:45	**Coffee Break**		
15:45 – 16:25	**Keynote Lecture 6** Room: Ballroom, 7/F *Chairpersons: Prof. Wen-Jue Soong and Prof. Sarabon Tahura*		
16:25 – 16:30	**Interventional Flexible Bronchoscopy in Children: State of the Art** *Prof. Ashkan Moslehi, Kuwait*		
	Question and Answer		
16:30 – 17:00	**Closing Ceremony and Presentation of Awards** Room: Ballroom, 7/F		

Synopsis

30 Oct, Friday

Parallel Workshop 1: Paediatric Airway Interventions by Flexible Bronchoscopy

Airway Mapping: From Images to Bronchoscopy
Professor Ashkan Moslehi, Kuwait

Understanding paediatric airway anatomy is fundamental to performing safe and effective bronchoscopy. Unlike adults, children have smaller and more variable airways, and subtle anatomical differences may influence bronchoscopic orientation and interpretation. Modern imaging techniques provide an opportunity to establish an anatomical roadmap before entering the airway.

A systematic understanding of normal paediatric airway anatomy, supported by imaging-based airway mapping, can improve bronchoscopic orientation, anatomical recognition, and procedural confidence. Integrating imaging with real-time bronchoscopic findings provides a valuable framework for starting paediatric bronchoscopy.

Synopsis

30 Oct, Friday

Parallel Workshop 1: Paediatric Airway Interventions by Flexible Bronchoscopy

Airway Foreign Bodies: Management by Flexible Bronchoscopy

Dr. An-Xia Jiao, Beijing, China

Airway foreign bodies are a common emergency in pediatrics. Among accidental deaths in children under one year old, 40% are caused by airway foreign bodies. Airway foreign bodies can be classified into endogenous foreign bodies and exogenous foreign bodies. Exogenous foreign bodies can be further divided into plant-based, animal-based, chemical-based, etc. They can be initially diagnosed based on medical history, symptoms, signs, and imaging. Flexible bronchoscopy plays an important role in the diagnosis and treatment of airway foreign bodies. Foreign bodies can be removed through methods such as lavage, foreign body forceps removal, and cryotherapy. Appropriate accessories can be selected based on different foreign bodies to safely and efficiently remove airway foreign bodies. Complications such as airway stenosis, bronchial dilation, and bronchial occlusion after the foreign body removal can also be improved by comprehensive interventional treatment under bronchoscopy for ventilation.

Synopsis

30 Oct, Friday

Parallel Workshop 1: Paediatric Airway Interventions by Flexible Bronchoscopy

Flexible Bronchoscopy-Guided Cryotherapy and Thermoablation in Children

Professor Sarabon Tahura, Bangladesh

Flexible bronchoscopy-guided cryotherapy and thermoablation represent valuable therapeutic advancements in interventional pulmonology, providing minimally invasive approaches for managing selected endobronchial lesions and central airway obstruction. These techniques facilitate airway recanalization, removal of obstructive tissue, control of bleeding and restoration of airway patency, potentially reducing the need for more invasive surgical interventions. Cryotherapy employs extreme cold to destroy pathological tissue, while cryoextraction allows the bronchoscopic removal of granulation tissue, selected endobronchial lesions and certain foreign bodies or obstructing materials. In contrast, thermal techniques, such as argon plasma coagulation (APC) and electrocautery, use controlled heat to achieve tissue coagulation, haemostasis and therapeutic debulking.

The application of these modalities in children requires particular expertise because of their narrow airway caliber, vulnerable mucosal lining, and limited tolerance of airway compromise. Successful intervention depends on appropriate case selection, age- and size-adapted instruments, careful procedural planning, precise application of cryogenic or thermal energy and continuous monitoring of respiratory and cardiovascular status. Cryotherapy can be useful in selected cases involving endobronchial granulation tissue and benign lesions, whereas APC and electrocautery may be advantageous for controlling bleeding and removing obstructive tissue when clinically indicated. The selection of a specific technique should be individualized according to the underlying pathology, lesion characteristics, anatomical location, vascularity and the child's overall clinical condition.

Incorporating cryotherapy and thermoablation into flexible bronchoscopy may broaden the scope of minimally invasive airway interventions in children, particularly in settings where access to specialized rigid bronchoscopy or advanced thoracic surgery is limited. Nevertheless, pediatric experience with these procedures remains relatively limited and their application requires careful consideration of potential complications, including airway injury, bleeding, oedema and thermal damage.

This presentation will focus on the practical applications on flexible bronchoscopy-guided cryotherapy and thermoablation in children, highlighting procedural techniques, clinical indications, patient selection, safety considerations, challenges and outcomes with particular emphasis on their role in managing complex paediatric airway disorders.

Synopsis

30 Oct, Friday

Parallel Workshop 1: Paediatric Airway Interventions by Flexible Bronchoscopy

Paediatric Airway Stenting

Professor Ashkan Moslehi, Kuwait

Paediatric airway stenting is an important therapeutic option for selected children with severe or persistent airway obstruction. Stenting may be considered in conditions such as complex airway stenosis, malacia, airway compression, post-surgical airway complications, and selected tracheobronchial fistulas when conventional treatment is insufficient or not feasible. Careful patient selection and appropriate stent choice are essential to achieve effective airway stabilization while minimizing complications.

Different types of airway stents have specific advantages and limitations in children. A structured approach to patient selection, stent placement, surveillance, and management of complications is essential for safe and effective paediatric airway stenting.

Synopsis

30 Oct, Friday

Parallel Workshop 1: Paediatric Airway Interventions by Flexible Bronchoscopy

Anesthesia/Sedation for Interventional Bronchoscopy: Oxygenation and Ventilation Support

Professor Wen-Jue Soong, Taichung City, Taiwan

Soong's ventilation (SV) is a simple, novel, and noninvasive ventilation (NIV) technique. It composes three main components of 1) continuous pharyngeal oxygen insufflation (PhO_2), with optional maneuvers of 2) pinch nose-closure (NC) and/or 3) abdominal-compression (AC). This SV of PhO_2-NC-AC is operator-dependent and has proved effective supporting and enhances the performance of pediatric flexible bronchoscopy (FB) in both diagnostic and therapeutic interventions, even in severe compromised airways and critical illness. SV can create O_2-PPV and help FB to improve airway patency, dynamic and precisely controllable expansion of airway lumens and visualization, facilitating accurate diagnostic assessment. SV without using airway devices, thereby it allows more facial space, central airway lumens, and smoother instruments manipulation. In addition, SV also enabling safer cardiopulmonary stability for various and complicated therapeutic interventions such as laser ablation, balloon dilation, cryotherapy, stent implantation and repair in both upper and lower airway lumens. Both the NC and the AC maneuvers can be optionally performed at a rate of 0 to 20 cycles/min as needed before, during, and following the FB procedures. In the past three decades, our team had successfully completed more than 12,500 FB procedures, about one-third belongs to therapeutic, in neonates, children and even adult with this SV-FB modality. There is no age (preterm neonates to adult) and body weight (500 gm to 110 kg) limitations. Overall, SV serves as a safe, practical, and efficient adjunct that provides synergistic respiratory support while allowing synchronized coordination with both diagnostic and therapeutic FB. Compared with traditional respiratory support, SV distinguished by its direct and controlled O2-PPV, no airway interface, preservation of FB working space. These characteristics make it particularly optimize both diagnostic and therapeutic pediatric FB.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

CF: Making Diagnosis

Professor Sushil Kabra, India

Till few years ago cystic fibrosis (CF) was considered to be disease of Caucasian population. Over past few decades diagnosis of CF has been reported from all over the world suggesting that CF occurs in other ethnic groups. Though precise magnitude of problem not known in other ethnic group but it is clear that diagnosis of CF is missed. The reasons for missing the diagnosis is mainly ignorance in clinicians and non-availability of diagnostic tests.

Diagnosis of CF is suspected with clinical phenotype and confirmed by documenting raised sweat chloride or by documenting two disease causing mutations in blood.

Clinical manifestations of CF are variable. The symptoms and signs vary according to age of the child. Clinical features are similar to that in Caucasian population with some variations.

With availability of genetic testing for identification of cystic fibrosis, many cases have been reported from East Asian countries. The available information on type of mutations from different regions of Asia suggest that mutation profile of children with CF from west Asia suggest that there are regional variations in the predominant mutations.

Due to malfunctioning of chloride channel the sweat in children with CF has increased chloride and sodium. This defect is used for making diagnosis of CF. The diagnostic criteria for CF include raised sweat chloride of >60 mEq/L on two occasions with clinical phenotype. Raised sweat chloride is considered to be gold standard for diagnosis of CF. N.

In countries from South east Asia and east Asia, sweat test is not available easily and the commercially available equipment are expensive.To overcome problem of non-availability of diagnostic tests, we carried out study to develop an algorithm based on detail history, examination and commonly available lab tests.

Sweat test can be performed by using commercially available equipment, majority are based on pilocarpine iontophoresis. The methods include induction of sweat, collection and then estimation of chloride. The latter is estimated by titration, ion selective electrodes, conductivity or osmolality. An indigenous method of sweat chloride estimation was developed and validated. The test is inexpensive and can be used in resource limited setting.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

How Intensively should we Identify and Treat Respiratory Infections in Cystic Fibrosis?

Professor Bulent Karadag, Turkey

Respiratory infection remains a central concern in cystic fibrosis (CF), requiring timely pathogen identification and individualized treatment. The intensity of investigation and therapy must balance the prevention of progressive lung damage against antimicrobial resistance, drug toxicity, and treatment burden. Highly effective CFTR modulator therapy adds further questions regarding surveillance and the continued need for established antimicrobial strategies.

This presentation will examine three practical decisions: how actively to search for respiratory pathogens, when pathogen detection should trigger treatment, and how intensively pulmonary exacerbations should be managed. Diagnostic approaches will include routine microbiological surveillance, sampling in children who cannot expectorate, and the selective use of induced sputum, bronchoscopy, and molecular methods. Particular attention will be given to interpreting negative cultures and distinguishing new acquisition, chronic infection, and clinical deterioration.

Treatment discussions will focus on early eradication of newly acquired Pseudomonas aeruginosa, suppressive treatment of chronic infection, and antibiotic selection during pulmonary exacerbations. The roles of previous microbiology, disease severity, treatment response, and antimicrobial susceptibility results will be considered when choosing treatment route, combinations, and duration. Selected challenges involving methicillin-resistant Staphylococcus aureus, nontuberculous mycobacteria, and other difficult-to-treat organisms will also be addressed.

Finally, the presentation will explore how CFTR modulators influence infection assessment and treatment decisions, particularly when symptoms and sputum production decrease. Areas of established practice will be distinguished from those where evidence remains insufficient to support treatment reduction. The aim is to provide a practical framework for protecting lung health through proportionate surveillance, timely intervention, and regular reassessment.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

Nebulizer Therapy
Dr. Ka-Ka Siu, Hong Kong SAR

Nebulizer therapy remains a core component of cystic fibrosis care in the Asia-Pacific region because CFTR mutation profiles differ substantially from those of Western populations, leaving many patients ineligible for currently approved modulator therapies. This talk will review why inhaled treatment still matters, focusing on delayed diagnosis, established bronchiectatic lung disease, and the continuing need for airway-directed therapy in patients without access to highly effective modulators. The session will summarize the evidence for key nebulized mucoactive therapies, particularly dornase alfa and hypertonic saline, including their effects on mucus clearance, lung function, pulmonary exacerbations, and tolerability. It will also address real-world issues that often determine success more than efficacy alone: device choice, inhalation technique, adherence, treatment burden, cost, and unequal access across the region. Attendees should expect a practical, evidence-based framework for positioning nebulizer therapy within contemporary CF care in Asia-Pacific settings where modulator gaps remain large and inhaled treatment is still indispensable.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

CFTR Modulators in Asia

Professor Sushil Kabra, India

Treatment of Cystic Fibrosis is supportive and consist of pancreatic enzymes replacement, fat soluble vitamin supplementation, taking care of nutrition by improving caloric intake, airway clearance, bronchodilators, mucolytic agents, antibiotics, inhaled steroids etc. Additionally, as and when required systemic/ oral/ inhaled antibiotics.

Advances in treatment based on identification of Genetic mutations opened possibility of Genetic medicines including Gene therapy, mRNA therapy, Gene editing and modulating CFTR function. As of now the treatment translated in clinical practice is CFTR modulators only. These has improved the treatment and survival of children with CF.

Four CFTR-directed modulators have reached at clinical application Ivacaftor, Tejacaftor, Lumacaftor and Elaxocaftor.

FDA approved ivacaftor for patients aged 1 and older: gating mutations: G178R, S549N, S549R, G551D, G551S, G1244E, S1251N, S1255P, or G1349D; residual function mutations: A455E, E193K, R117C, A1067T, F1052V, R347H, D110E, D110H, F1074L, R352Q, G1069R, R1070Q, D579G, K1060T, R1070W, D1152H, L206W, S945L, D1270N, P67L, S977F, E56K, or R74W; splice mutations: 711C3A!G, 3272-26A!G, E831X, 2789C5G!A, or 3849C10 kb C!T, conduction mutation R117H.

Single drug failed to provide good results, therefore strategy to combine the correctors with potentiators a “combination therapy” was tested in vitro and in clinical trials.

Two drug combination (Ivacaftor, Lumacaftor) showed a mean absolute improvement in FEV1 ranging from 2.6 to 4.0 percentage points significant weight gain reduction in pulmonary exacerbations. FDA approved combination therapy (Ivacaftor and Lumacaftor) in 2015 for patients ages 12 and older who have two copies of the F508del mutation.

Limitation of two drug combination include a variable clinical responsiveness. Less than 50% of patients had a FEV1 improvement by more than 5%, and only 25% of patients improved by more than 10%. This led to evaluation of other agents.

A triple-combination therapy (Elexacaftor/Tezacaftor/Ivacaftor) in adult CF patients carrying two copies of the F508del mutation or one copy of F508del and one copy of minimal CFTR function mutation. There was significant increase in FEV1 up to 13.3% significant reduction in Cl levels in the sweat test. This therapy reported to reverse bronchiectasis in some patients.

<u>CFTR Modulators in Asia: Challenges and Way Forward</u>

Highly effective CFTR modulators possibly the biggest event in cystic fibrosis treatment since the introduction of pancreatic enzymes in the 1950s. Many challenges, including Timely diagnosis (particularly in LMICs), Equitable access to these high-cost medications, no known modulators for patients with less common genetic variants (<50% of children with CF are eligible for Trikafta as per published list from CF foundation), these are not available in majority of countries in Asia and need import with exorbitant cost. The cost of Orkambi: Rs 10 lacs (11000 US$ per month). Cost of Trikafta: Rs 23 lacs per month ((US$25500 per month).

In India the drugs are not available, limited number of children (>6 years of age with mutations included in the list) with CF has access to free ETI on humanitarian ground. There is no clarity about sustainability of supply. Initial impressions from limited experience suggest that there is significant improvement in respiratory symptoms, improvement in lung health as indicated by improvement in FEV1, reduced number of exacerbations requiring admission, oral/IV antibiotics and weight gain with minimal side effects.

Major challenges for optimal utilization of CFTR modulator include how to identify modulator-responsive and non-responsive variants. The strategies may be in silico prediction, testing on Fisher Rat Thyroid cells, testing on Patient derived cells, randomized control trials for individuals with particular mutations, trial to individual children for few weeks.

As of now if plan to start CFTR modulator, first document mutation in the child with CF. Check if the mutations are included in the list of mutations that may benefit the child. Import medicines following the rules and regulation of country.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

Nutritional Support in Cystic Fibrosis

Assoc. Professor Harutai Kamalaporn, Thailand

Optimal nutritional management is a cornerstone of cystic fibrosis (CF) care and plays a crucial role in growth, pulmonary function, and long-term outcomes. This presentation focuses on practical approaches to nutritional assessment, individualized energy requirements, and the management of malnutrition, including pancreatic enzyme replacement therapy, micronutrient supplementation, and enteral nutritional support. Emerging challenges, particularly overweight and obesity in the era of CFTR modulators, are also addressed. Special emphasis is placed on the Asian context, where delayed diagnosis, undernutrition, and limited access to specialized nutritional services remain important barriers. Evidence-based, resource-adapted strategies are discussed to optimize nutritional care for individuals with CF across diverse healthcare settings in Asia.

Synopsis

30 Oct, Friday

Parallel Workshop 2: Cystic Fibrosis: From Zero to 100+

Contemporary Airway Clearance Technologies: A Workshop on Vest Machine, Aerobika, and Cough Assist Devices

Ms. Brigitte KY Fung, Hong Kong SAR

Retained bronchopulmonary secretions contribute significantly to respiratory morbidity, hospitalisation, and mortality in chronic lung and neuromuscular diseases. Airway clearance techniques (ACTs) are essential, yet clinicians must understand device indications, mechanisms, and proper application to optimise outcomes. This workshop provides healthcare professionals with comprehensive knowledge and practical skills in three key devices: the Vest Machine (High Frequency Chest Wall Oscillation, HFCWO), the Aerobika (Oscillating Positive Expiratory Pressure, OPEP), and the Cough Assist Machine (Mechanical Insufflation Exsufflation, MI E).

The Vest delivers rapid chest oscillations via an inflatable vest, breaking up mucus, stimulating cilia, and generating mini coughs. Parameters include frequency and pressure, with normal, ladder, and cyclical modes. Contraindications include active bleeding, pneumothorax, lung tumours, and cardiac arrhythmias. The Aerobika is a portable, drug free OPEP device that produces positive expiratory pressure and oscillations during exhalation, opening airways and loosening secretions. It is indicated for COPD, bronchiectasis, and cystic fibrosis, with evidence showing reduced exacerbations. Contraindications include raised intracranial pressure, haemodynamic instability, and recent facial or skull surgery. The Cough Assist applies gradual positive pressure to inflate lungs, then rapidly shifts to negative pressure to simulate a cough. It is indicated for ineffective cough (Peak Cough Flow <270 L/min), particularly in neuromuscular diseases like Motor Neurone Disease and spinal cord injury. Contraindications include undrained pneumothorax, bullae, bronchopleural fistula, and active pulmonary bleeding.

Each device has a distinct role: the Vest for passive general clearance, the Aerobika for cooperative ambulatory patients, and the Cough Assist for those with weak or absent cough. Proper patient selection, setup, and monitoring are critical.

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

Incentive Spirometry in Children
Professor Basil Elnazir, Ireland

This interactive workshop will look at the practical use of incentive spirometry, a simple breathing exercise that helps encourage deep breathing and supports lung expansion. The workshop will explain how the device works, demonstrate the correct technique, and highlight its role in preventing complications such as reduced lung function and breathing difficulties, particularly after surgery or during periods of limited mobility. Participants will also learn about common mistakes, safety considerations, and how to use incentive spirometry effectively as part of a patient's recovery. The session is designed to be practical and informal, giving participants the opportunity to build confidence and take away useful tips that they can apply in their own clinical settings.

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

Forced Oscillation Technique in the Lung Function Laboratory: From Principles to Practical Application

Dr. Michelle YP Tsang, Hong Kong SAR

Forced oscillation technique (FOT), also known as oscillometry, is a non-invasive method for assessing respiratory system mechanics during quiet tidal breathing. Unlike spirometry, FOT does not require deep inspiration or forced expiration and may therefore be particularly useful in children, older adults and patients who have difficulty performing conventional lung function tests.

This workshop will begin with a lecture introducing the principles of FOT. External pressure oscillations are applied at the airway opening, and the resulting airflow is measured to calculate respiratory system impedance. The physiological and clinical interpretation of resistance and reactance will be discussed, including resistance at 5 Hz, reactance at 5 Hz, frequency dependence of resistance, resonant frequency and reactance area. The lecture will also cover within-breath oscillometry and its potential role in identifying expiratory flow limitation and peripheral airway abnormalities.

The lecture will be followed by a hands-on session during which participants will observe and perform FOT measurements, assess test quality and review representative respiratory impedance graphs. Practical interpretation of normal and abnormal patterns, bronchodilator responses and the complementary role of FOT alongside spirometry will be demonstrated.

By the end of the workshop, participants will gain a practical understanding of the principles, performance, quality assessment and clinical interpretation of FOT in the evaluation of asthma and other respiratory diseases.

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

Challenge Tests in Lung Function

Professor Anne Goh, Singapore

Challenge tests are done mainly to identify airway hyper-responsiveness for the diagnosis of suspected asthma. There are 2 types of challenges: 1) Direct challenges where the stimulus used acts directly on the receptors to cause the airway smooth muscles to contract and 2) Indirect challenges where the stimulus used acts indirectly by causing the release of mediators that cause the airway to narrow.

The most frequently performed direct challenge is with the use of methacholine where increasing doses of methacholine is nebulized to the patient and a spirometry test is performed after each dose to look for a fall in FEV_1 by 20% from the baseline. A provocative dose (PD_{20}) of ≤ 200ug or a provocative concentration (PC_{20}) of ≤ 8mg/ml is considered a positive response. It is good at ruling out asthma but false positives can occur with other respiratory and allergic diseases.

Indirect challenges include exercise challenge and mannitol challenge bring the 2 most commonly employed indirect challenges. They are best used to confirm asthma.

Exercise challenges are often done when patients complain of exercise-induced bronchoconstriction. The exercise challenge protocol aims to rapidly increase the heart rate and minute ventilation of the patient through intensive exercise over a 6 minute period. The inspired air should be relatively dry and cold (<25°C). Serial spirometry measurements are done over the first 30 mins after exercise. A >15% fall in FEV_1 is considered a positive test.

A mannitol challenge is done by inhaling increasing doses of mannitol through an osmohaler. Spirometry measurements are done at baseline and after each dose. A fall in FEV_1 of 15% from baseline or a decrease of 10% between 2 consecutive doses is considered positive.

Asthma drugs as well as exercise and caffeine should be stopped prior to challenge testing. Challenge tests should not be performed if the child has severe airflow obstruction with FEV_1<60% predicted and cardiovascular problems or is unable to perform the spirometry maneuvers.

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

Diffusion Capacity
Professor Gerald Loughlin, USA

The diffusion capacity of the lung for carbon monoxide is a measure of the amount of carbon monoxide transferred per minute from the alveolar gas to red blood cells. There are several methods but he one used most commonly in pulmonary function labs is the single breath method. Carbon monoxide is used as the test gas because of its high affinity for hemoglobin and because it largely reflects changes in the alveolar capillary membrane rather than pulmonary blood flow. It is based on the Fick Equation. Vg=[k8(A)(P1- P2)]/T where V is the volume of gas transferred per unit of time, k is the diffusion coefficient of the gas, A is the surface area for exchange, P1-P2 is the partial pressure difference across the alveolar-capillary membrane and T is the thickness of the membrane.

Useful as one of a battery of lung function tests used to evaluate patients with respiratory symptoms including dyspnea, hypoxemia, emphysema and evidence of interstitial disease. It is also used to assess disease severity, progression and response to therapy. Often used to evaluate the adverse effects on the lung secondary to cancer chemotherapy. It is affected by the alveolar surface area, blood in the pulmonary capillaries, concentration of hemoglobin and the thickness of the alveolar capillary membrane. The diffusion capacity measurement is also affected by blood in the alveolar spaces and cigarette smoking (contains CO in the exhaled smoke).

Normal values – >75% predicted up 140% predicted
Mild decrease – 60% to 74% predicted
Moderate decrease – 40% to 59% predicted
Severe decrease – <40% predicted
Units reported as ml of CO per minute per mm Hg

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

Demystifying the Body Box

Professor Anna Nathan, Malaysia

Body plethysmography as an essential, multidimensional diagnostic tool for evaluating complex respiratory mechanics.

While spirometry serves as the gold standard for basic dynamic flow, it cannot measure static lung volumes such as Residual Volume (RV) and Total Lung Capacity (TLC), nor can it evaluate airway resistance during normal resting breathing.

Plethysmography overcomes these blind spots by placing the patient in an airtight cabin (700–1000 L) and applying Boyle-Mariotte's Law i.e. V.P.= constant.

By monitoring shifting cabin pressure (ΔPbox) and mouth pressures (ΔPmouth) during a transient shutter occlusion manoeuvre at end-expiration, the system calculates the Functional Residual Capacity (FRCpleth).

Following shutter release, linked spirometry manoeuvres measuring Inspiratory Vital Capacity (IVC) and Expiratory Reserve Volume (ERV) allow full calculation of RV (FRC-ERV) and TLC (RV +IVC).

Specific Airway Resistance (sRaw) measured during quiet breathing as a reflection of specific work of breathing from true Airway Resistance (Raw), which incorporates lung volume via the mathematical equation: Raw= sRaw / [FRCpleth + VT/2].

Diagnostic sRaw breathing loops and pattern matrices allow clinicians to distinguish obstructive defects (characterized by elevated RV, RV/TLC%, and sRaw/Raw) from restrictive defects (marked by reduced TLC, VC, and FRC) and mixed disorders.

Finally, the presentation illustrates these physiological principles across real-world clinical case studies, including post-tuberculosis bronchiectasis, congenital diaphragmatic hernia (CDH), scoliosis with VACTERL association, and Duchenne muscular dystrophy.

Synopsis

30 Oct, Friday

Parallel Workshop 3: Lung Function: Tidal to Force

FeNO Measurement in the Lung Function Laboratory: From Technical Principles to Hands-on Practice

Dr. Michelle YP Tsang, Hong Kong SAR

Fractional exhaled nitric oxide (FeNO) is a non-invasive biomarker that provides information about airway inflammation and may support the assessment of asthma, eosinophilic airway inflammation and potential corticosteroid responsiveness. Reliable FeNO measurement requires appropriate patient preparation, standardised testing procedures and careful attention to quality control.

This workshop will begin with a lecture covering the physiological basis and technical principles of FeNO measurement using an electrochemical nitric oxide analyser. The standard procedure for bronchial FeNO testing will be reviewed, including controlled exhalation at a target flow rate of 50 mL/s, maintenance of appropriate mouth pressure and the importance of reproducible measurements. The interpretation of FeNO values in adults and children will be discussed, together with common factors that may affect test results.

The lecture will also introduce extended nitric oxide measurements. These include alveolar nitric oxide estimation using multiple exhalation flow rates to assess distal lung inflammation, as well as nasal nitric oxide measurement as a screening test for suspected primary ciliary dyskinesia. The indications, sampling methods and important quality considerations for these tests will be outlined.

A hands-on session will then allow participants to perform FeNO measurements, practise patient instructions, assess test acceptability and interpret the results. Practical examples will illustrate how FeNO findings can be integrated with symptoms, spirometry and other clinical information.

By the end of the workshop, participants will be able to apply the principles of FeNO testing in routine lung function practice and recognise its role as a complementary tool in the assessment of airway and respiratory tract inflammation.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Pathophysiology of Respiratory Insufficiency

Dr. Ellis KL Hon, Hong Kong SAR

Respiratory insufficiency and failure remain leading causes of intensive care admission and mortality in critically ill paediatric populations. Managing these fragile patients requires a deep, foundational understanding of respiratory pathophysiology, as standard treatment protocols must be precisely tailored to the specific anatomical and functional site of injury. This workshop provides an immersive, clinically driven exploration of paediatric respiratory mechanics, transitioning from core physiological concepts to bedside therapeutic applications.

The curriculum is structured around the three classic pathophysiological models that dictate paediatric respiratory disease: upper airway obstruction, lower airway disease, and parenchymal lung injury. Participants will first examine upper airway dynamics, focusing on conditions like croup and tracheomalacia, where extrathoracic collapse and high resistance demand strategic management. The workshop will then pivot to lower airway disorders, such as severe asthma and bronchiolitis, emphasizing the mechanics of intrathoracic airflow limitation, dynamic hyperinflation, and intrinsic positive end-expiratory pressure (auto-PEEP). Finally, the session will address parenchymal lung diseases, specifically pneumonia and paediatric acute respiratory distress syndrome (pARDS). This segment will analyze the consequences of severe ventilation-perfusion (V/Q) mismatch, right-to-left shunting, and altered lung compliance.

Through a brief lecture, high-fidelity mechanical lung simulations, and case-based discussions, facilitators will connect these distinct pathophysiological states to advanced respiratory support strategies. Attendees will learn to optimize invasive and non-invasive mechanical ventilation settings, interpret complex ventilator waveforms, and apply lung-protective ventilation strategies to mitigate ventilator-induced lung injury (VILI). This workshop equips clinicians with the critical thinking skills necessary to decipher complex respiratory mechanics, anticipate clinical deterioration, and implement targeted, physiology-driven interventions to improve outcomes in critically ill children.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Acute Non-invasive Ventilation in Children: A Structured, ICEMAN-Based Approach to Safe Initiation

Dr. Manu Sundaram, Qatar

NIV is no longer a PICU-only therapy. It is now used in high-dependency units, general paediatric wards, emergency departments, and even at home. This wider use needs a shared, structured approach.

Three modalities are commonly used: high-flow nasal cannula (HFNC), continuous positive airway pressure (CPAP), and bilevel positive airway pressure (BiPAP). Each works differently, so selection should follow physiology, not convenience. HFNC washes out nasopharyngeal dead space and gives a variable, flow-dependent PEEP. It is an oxygenation device, not a true ventilatory one. CPAP recruits collapsed alveoli and improves functional residual capacity, but it does not reliably correct hypercapnia. Only BiPAP reliably lowers CO_2, through separate inspiratory and expiratory pressures that offload the respiratory pump.

Safe initiation needs a structured framework. We use ICEMAN: Indications, Contraindications, Equipment, Mode and settings, Assessment and monitoring, and Next steps. It was developed through the ESPNIC FAST-NIVT programme, and it works well both as a bedside tool and for teaching.

Indications and Contraindications

Indications fall into two groups. Type 1 is hypoxaemic failure: bronchiolitis, pneumonia, asthma, pulmonary oedema. Type 2 is hypercapnic failure: neuromuscular disease, chronic lung disease, central hypoventilation. Contraindications may be absolute or relative. Absolute ones include cardiorespiratory arrest, GCS below 10, absent airway reflexes, uncorrected airway compromise, haemodynamic instability, and severe ARDS by PALICC-2 criteria. Relative ones include undrained pneumothorax, multi-organ failure, agitation, and copious secretions. In suspected moderate-to-severe ARDS, only a brief trial is appropriate, not exceeding four hours, before moving to intubation.

Equipment

Equipment matters as much as settings. Interface type and size must be correct, and skin protection should be applied early, with hydrocolloid dressing. Pressure injuries affect 20 to 50 percent of children on long-term positive pressure, and excess leak is an independent risk factor for failure.

Mode and Settings

Settings should be age-adjusted. CPAP usually starts at 5 to 6 cmH_2O. BiPAP usually starts at IPAP 10 to 12 and EPAP 4 to 6 cmH_2O, titrated in small steps. In infants below three months, use lower starting pressures and prefer a nasopharyngeal interface.

Assessment and Next Steps

Monitor SpO_2 and heart rate continuously, and watch the work-of-breathing trend closely. For BiPAP, also monitor CO_2. Judge response at one to two hours. Red flags need immediate escalation: rising FiO_2, worsening tachypnoea or recession, and falling consciousness. Decide failure criteria and the weaning plan before starting, not after. PICU intubation rates remain near 18 percent, and delayed intubation after true failure raises mortality.

Conclusion

The basic structure for safe NIV does not change, even outside the PICU. It needs trained staff, reliable monitoring, a steady oxygen supply, and a clear escalation pathway, agreed in advance. Used this way, ICEMAN turns NIV into a reproducible skill: teachable, and auditable too.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Invasive Ventilation: The Right Strategy

Dr. Judith JM Wong, Singapore

Successful invasive mechanical ventilation requires an understanding of the physiological abnormalities responsible for respiratory failure rather than the application of fixed ventilator settings. The optimal ventilatory strategy varies according to lung mechanics, disease processes, and patient-specific factors.

This workshop will review the physiological principles underlying invasive mechanical ventilation, including respiratory system compliance, airway resistance, and patient-ventilator interaction. A practical framework for selecting ventilator modes and establishing initial ventilator settings will be presented. Through clinical case discussions involving severe asthma and paediatric acute respiratory distress syndrome (ARDS), participants will explore contrasting ventilation strategies for obstructive and restrictive lung disease. Key concepts including permissive hypercapnia, lung-protective ventilation, avoidance of dynamic hyperinflation, recognition of intrinsic positive end-expiratory pressure (auto-PEEP), and physiologically guided PEEP titration will be highlighted.

The session aims to equip clinicians with a structured approach to invasive mechanical ventilation that integrates physiological understanding with bedside decision-making, enabling safer and more effective management of critically ill children.

Learning Objectives

By the end of this session, participants will be able to:

1. Understand the physiological principles that guide invasive mechanical ventilation
2. Select an appropriate ventilator mode and initial settings
3. Recognize how underlying disease physiology influences ventilator strategy
4. Apply a practical approach to common PICU conditions such as asthma and ARDS

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Apnoeic Oxygenation for Intubation

Professor Andreas Schibler, Australia

Apnoeic oxygenation provides supplemental oxygen during laryngoscopy and intubation, aiming to delay desaturation while the patient is apnoeic. This is particularly relevant in neonates and children, who have limited oxygen reserves and can desaturate rapidly. In neonates, evidence from randomised trials supports longer safe apnoea and less hypoxaemia, and current neonatal and infant airway guidance recommends apnoeic oxygenation during tracheal intubation. In older children, small elective studies suggest benefit, but results from emergency and intensive care settings are less definitive. In a 2025 multicentre trial, nasal high flow did not significantly reduce hypoxaemia or improve first-attempt intubation in the primary analysis; a per-protocol analysis found fewer hypoxaemic events. Overall, apnoeic oxygenation is supported for neonatal intubation, while in children its effect appears dependent on setting and delivery method. It should complement effective preoxygenation and careful airway management; the optimal approach and its impact on clinically important outcomes remain uncertain.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Ventilation during Critical Care Transport

Dr. Karen KY Leung, Hong Kong SAR

Critical care transport is a uniquely high-risk period for ventilated neonates and children. Movement, limited space, finite power and oxygen supplies, and variable monitoring increase the likelihood that seemingly minor problems – such as interface/circuit dislodgement, loss of flow or oxygen supply, or ventilator alarms – rapidly become clinically significant. This session provides a practical framework for maintaining safe oxygenation and ventilation during transport, centred on preparation, clear team roles, and anticipating predictable failure points.

A standardised transport readiness check is reviewed (power/battery, oxygen source planning, circuit security, alarms and monitoring), alongside a modality-based approach to common transport scenarios, including key considerations for HFNC, NIV, invasive ventilation, high-frequency ventilation, and continuation of inhaled nitric oxide (iNO). Air-transport considerations are introduced, focusing on altitude-related pressure changes and their implications for gas volumes and equipment performance. The session links directly to the hands-on workshop, which includes HFNC setup practice, response to common transport ventilator alarms, and an overview of maintaining iNO therapy during transport.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Neurally Adjusted Ventilatory Assist: A Physiological Lens on the Power–Load–Drive Triad of Respiratory Failure in Children with Neuromuscular Disease

Dr. Manu Sundaram, Qatar

Background

Respiratory failure can be conceptualised as an imbalance between three interdependent elements: respiratory muscle power (the capacity of respiratory muscles to generate force), respiratory load (the mechanical work demanded of those muscles by lung and chest wall mechanics), and neural respiratory drive (the central output required to meet that demand). In children with neuromuscular disease (NMD), any or all three elements may be deranged – weak muscles reduce power, stiff or restrictive chest walls increase load, and drive itself may be intact, exaggerated, or blunted depending on disease stage and comorbidity. Conventional ventilator monitoring offers little insight into which element is driving a given episode of respiratory failure.

Discussion

Neurally Adjusted Ventilatory Assist (NAVA) uses diaphragmatic electrical activity (Edi) as a direct, continuous readout of neural respiratory drive, and – interpreted alongside delivered pressure and resulting tidal volume – allows drive, load, and power to be distinguished at the bedside. A high Edi with adequate tidal volume suggests increased load or reduced power that the child is still able to compensate for; a high Edi with inadequate volume suggests a power deficit outstripping compensatory drive; and a low or falling Edi in a deteriorating child suggests failing drive itself, a pattern of particular concern in NMD given the risk of central respiratory involvement or sedation-related suppression. Each pattern implies a different ventilatory strategy – supporting load, unloading fatigued muscles, or escalating support to compensate for failing drive – making NAVA a diagnostic as well as a therapeutic tool.

Conclusion

Framing NAVA through the power–load–drive triad offers clinicians a physiologically grounded, mechanism-specific approach to interpreting and supporting respiratory failure in children with neuromuscular disease, moving ventilatory decision-making beyond empirical trial-and-error titration.

A Simple Bedside Framework: Diagnosing Power, Load, and Drive Problems with NAVA

The table below offers a practical, bedside approach to distinguishing which component of the triad is dominant in a given child, using signals already visible on a NAVA-enabled ventilator.

Component	Edi Pattern	Edi vs. Vt/Paw Relationship	Bedside Test	Action
Power problem (weak muscles)	Edi elevated, often persistently	High Edi but disproportionately low Vt for the pressure delivered	Trial increase in NAVA level: if Vt fails to rise proportionally with Edi, power is limiting	Increase support; assess reversible causes (sedation residual, electrolyte disturbance, nutrition); treat underlying weakness
Load problem (mechanical impedance)	Edi elevated, normalises once adequately supported	High NAVA level required to achieve adequate Vt; Edi falls appropriately once load is addressed	Check compliance/resistance, secretions, atelectasis, chest wall/scoliosis, pain or agitation	Treat underlying cause (secretion clearance, optimise PEEP/ positioning, treat pneumonia/ atelectasis, analgesia)
Drive problem (central/neural)	Edi low, falling, or absent despite clinical deterioration	Edi disproportionately low relative to clinical distress or apnoea	Review sedation/opioid burden, check for CNS pathology, electrolyte/metabolic disturbance	Reverse sedation where possible; evaluate for central hypoventilation; ensure adequate backup ventilation

In practice, more than one element is often abnormal simultaneously – for example, a child with SMA type 1 recovering from an intercurrent pneumonia may show a mixed load-and-power pattern that resolves in a stepwise fashion as infection clears and gene therapy takes effect. Serial Edi trends over hours to days, rather than single time-point readings, are usually most informative for tracking which element is improving.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Troubleshooting Paediatric NIV: A Case-based Practical Approach

Professor Aroonwan Preutthipan, Thailand

Long-term home noninvasive ventilation (NIV) has become an important treatment for children with chronic respiratory failure. It can improve gas exchange and quality of life while avoiding complications associated with tracheostomy. Common indications include neuromuscular weakness, restrictive chest wall disorders, obesity hypoventilation syndrome, and chronic respiratory disorders associated with alveolar hypoventilation[1,2]. Despite these benefits, several problems have been reported during long-term NIV[1,3].

Unlike acute NIV management in the pediatric intensive care unit, troubleshooting home NIV requires recognition that underlying medical conditions may improve or deteriorate over time, leading to changes in ventilatory requirements and the need to adjust ventilator settings. For example, changes in body weight, particularly weight gain, may also increase ventilatory requirements and necessitate higher ventilator pressures and vice versa. One of the most challenging problems in troubleshooting home NIV is the development of hypercapnia despite established ventilatory support. Possible causes include poor adherence, excessive mask or circuit leaks, inadequate ventilatory support due to inappropriate settings, and progression of the underlying diseases. Modern NIV devices offer the important advantage of providing downloadable data, allowing clinicians to objectively assess adherence, mask leaks, respiratory patterns, and ventilator performance. However, these data must be interpreted cautiously, as both intentional and unintentional leaks can affect the accuracy of ventilator-derived measurements, making their interpretation less straightforward than that of conventional ICU ventilator data. Furthermore, the algorithms used by many home NIV devices are primarily developed for adults and may not accurately reflect the apnea–hypopnea index (AHI) in children because pediatric respiratory event scoring criteria differ from those used in adults. A stepwise approach should begin with clinical assessment and review of download data, followed by evaluation of mask leak, ventilator settings, respiratory muscle function, chest radiography, spirometry, arterial or venous blood gas analysis, and overnight pulse oximetry and carbon dioxide monitoring. Polysomnography with NIV titration may be necessary when the cause of persistent hypoventilation remains unclear[1,4].

Midface hypoplasia is another important complication of prolonged positive airway pressure therapy in growing children, first highlighted in early case reports and subsequently documented in observational studies[5-7]. Preventive strategies include appropriate interface selection, minimizing excessive pressure on facial structures, alternating pressure points, and regular monitoring of facial growth. Early orthodontic or maxillofacial assessment may allow corrective intervention while maintaining effective ventilatory support[7,8].

Complications and inadequate ventilation during long-term home NIV should be identified early through regular clinical assessment, objective monitoring, and timely intervention. An individualized approach to troubleshooting is essential to maintain effective ventilation, prevent long-term complications, and optimize outcomes in children receiving home NIV.

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Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

Tracheostomy – Optimal Home Care Strategies

Ms. Sheila Kun, USA

Caring for a child at home with a tracheostomy requires extensive preparation, and comprehensive training in the hospital. In addition, home health services and community resources need to be in place for subsequent management. This presentation summarizes the best home care practices from successful programs and highlights recommendations from the American Thoracic Society on tracheostomy care. It captures home care tips from parents as well. The key ingredients of an impactful home care program include and begin with dedicated caregivers who have gone through a standardized discharge process with vigorous training on both routine and emergency care. Potential home care emergencies are identified with suggested guidelines for response and prevention. Useful tips on the utilization of durable medical equipment and supplies are shared, along with helpful hints on suctioning, use of speaking valve and guidelines on the readiness of the decannulation process. Beyond the logistics of home care procedures, integration and organization skills are essential to make home care safe, easy and manageable. We value partnering with parents to make joint decisions in treatments and accompany them throughout their health journey to attain what life can offer.

Synopsis

30 Oct, Friday

Parallel Workshop 4: Ventilators Optimization: PICU Transport to Home

High Velocity Therapy in Paediatric Respiratory Care: From Mechanism to Bedside

Dr. Theresa Schultz, USA

Background

Children presenting with respiratory distress often require rapid escalation of respiratory support. Traditional noninvasive ventilation interfaces may be poorly tolerated in infants and young children, potentially limiting treatment effectiveness. High Velocity Therapy (HVT) is a humidified, high-flow nasal insufflation therapy designed to provide respiratory support through a comfortable, mask-free interface while incorporating mechanisms that may reduce work of breathing and improve gas exchange.

Objective

To review the physiologic principles underlying HVT, summarize the emerging clinical evidence supporting its use in paediatric respiratory disease, and discuss practical considerations for implementation in acute care settings.

Methods

This presentation examines the mechanistic basis of HVT and reviews published paediatric clinical studies evaluating its use across common respiratory conditions. Evidence related to treatment effectiveness, escalation of care, patient tolerance, and operational considerations is discussed, together with practical implementation strategies for emergency department, paediatric ward, and critical care environments.

Results

Available paediatric evidence suggests that HVT can provide effective respiratory support through a well-tolerated nasal cannula interface and may offer benefits in selected patients with acute respiratory compromise. Clinical investigations reviewed include studies of paediatric respiratory distress and acute severe asthma, demonstrating the feasibility and safety of HVT and supporting its role as a therapeutic option within contemporary paediatric respiratory care pathways.

Conclusions

HVT represents an increasingly utilized noninvasive respiratory support modality for paediatric patients. Understanding the physiologic mechanisms, clinical evidence base, and practical implementation considerations may help clinicians optimize respiratory support while improving patient comfort and tolerance. Ongoing investigation will further define the role of HVT across paediatric respiratory conditions and care settings.

Keywords

Paediatric respiratory distress; high velocity therapy; high-flow nasal therapy; noninvasive respiratory support; paediatric emergency medicine; bronchiolitis; respiratory care.

Synopsis

31 Oct, Saturday

Keynote Lecture 1

Paediatric Pulmonary Tuberculosis Guideline – 2026 Based on APPS Clinical Guidance for Paediatric Tuberculosis

Professor Varinder Singh, India

APPS guidance translates tuberculosis (TB) evidence into clinical decisions for children and adolescents across diverse Asian settings. This clinician-facing guidance focuses on pulmonary and intrathoracic tuberculosis (TB), with selected extrapulmonary pathways. It interprets WHO recommendations in diverse Asian settings while retaining national policy for implementation. Its distinctive contribution is the integration of disease phenotype, diagnostic probability, resistance testing and treatment eligibility within a programme-compatible, individualised care pathway. The principal novelty lies in this clinical and implementation framework, rather than in new diagnostic tests or treatment regimens[1-4].

Development Process

The guidance combines WHO recommendations and original studies with available national and local pediatric TB guidance and selected implementation reports. Review domains include diagnostic pathways, specimen feasibility, phenotype terminology, regimen adoption, referral thresholds and training requirements. Regional notification comparisons retain source age bands and use the complete 2024 series from the WHO 2025 reporting cycle. National sources differ in recency and accessibility, so the document makes these limitations explicit and distinguishes recommendation, policy inclusion and confirmed operational availability[1,2,5].

Earlier drafts were circulated to invited country and subject experts and other stakeholders for developmental input. Formal multidisciplinary and country-level review remains in process. This document should therefore be presented as an initial view of a work in progress for a formal endorsement or regional consensus.

Distinctive Clinical Approach

The guidance connects public-health feasibility with specialist clinical judgement. Chest radiography serves as an early pivot for probability, phenotype, sampling and severity, while a normal or equivocal film does not close the diagnostic pathway when clinical concern persists. Primary and post-primary patterns, airway involvement and closed nodal disease guide specimen choice and interpretation of negative tests. Clinical diagnosis remains possible without microbiological confirmation, but requires documented reasoning, credible alternatives and timed reassessment[1-3].

Novel Elements Brought Together

First, a connected diagnostic pathway links exposure and vulnerability to imaging, lesion-directed sampling and reflex resistance testing, with urgent overrides for severe illness. Respiratory, gastric, stool and extrapulmonary samples are interpreted according to the compartment sampled and bacillary burden.

Second, diagnostic probability is separated from severity assessment for treatment selection: low molecular burden alone cannot establish non-severe disease or justify shorter therapy[1-4].

Third, treatment shortening is framed as an implementation process requiring explicit eligibility, adequate radiography, second review when uncertain, a documented completion decision and outcome surveillance.

Fourth, treatment options are located within actual country policy and access, with caution about extrapolating trial results to routine drug-resistant TB care.

Finally, prevention, nutrition, toxicity monitoring, school participation and post-TB respiratory health complete the individualised care plan[1,2,4,6].

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Synopsis

31 Oct, Saturday

Keynote Lecture 2

Asthma Management 2026
Professor Basil Elnazir, Ireland

Asthma is the most common long-term illness in children, affecting their daily lives and posing significant burden on young people, their families and healthcare services.

Most children achieve control with inhaled corticosteroid treatment but a small group with severe persistent disease continues to have frequent exacerbations, hospital admissions and long term steroid therapy.

This plenary lecture will review recent advances in the understanding and management of childhood asthma with particular focus on deep control and growing role of biological therapies. It will highlight the shift from 'one-size-fits all' approach to precision medicine in which asthma is defined by phenotypes and endotypes specially type 2 (T2-High) inflammation.

Synopsis

31 Oct, Saturday

Parallel Symposium 1: Asthma

Managing Paediatric Asthma and Wheezing in the Light of GINA 2026 Guidelines
Dr. Alfred YC Tam, Hong Kong SAR
(Lecture sponsored by AstraZeneca)

Although the prevalence of asthma is slowly decreasing in the whole world, wheezing in children and the possibility of developing asthma is still a great concern for paediatricians and parents alike. Asthma in children differs from that in adults in being predominantly a Type 2 inflammation, often beginning with wheezing from a young age, and often abates beyond puberty. Diagnosing asthma in children is still a clinical exercise, but is often challenging in pre-school children. The 2026 GINA guidelines provide updates on the diagnosis and management of asthma for children 5 years or younger, and 6-11 years of age. Essentially, SABA should NOT be used in isolation anymore, and early introduction of ICS intermittently or continuously will give a better outcome. Empowering parents to manage symptoms early continues to be a challenge. A long-term perspective is essential to convince parents to work with the clinician for early and best control, and hopefully remission of the disease. The advent of various biologics has given hope for remission of asthma to happen even when disease is advanced and difficult to treat.

Synopsis

31 Oct, Saturday

Parallel Symposium 1: Asthma

Climate Change and Thunderstorm Asthma in Children: Challenges and Responses

Professor Kun-Ling Shen, Beijing & Shenzhen, China

Climate change increases thunderstorms and airborne allergen concentrations, worsening thunderstorm asthma (TA), a major environmental health threat to children with underdeveloped respiratory and immune systems. Epidemic thunderstorm asthma (ETSA) causes mass acute asthma attacks after thunderstorms and may lead to fatalities. Thirty-nine global ETSA outbreaks have been documented since 1983. The 2016 Melbourne outbreak resulted in 10 deaths and a sharp surge in respiratory emergency visits. Clustered pediatric cases have also been reported across China. Northern outbreaks are mainly triggered by autumn Artemisia pollen, while milder spring episodes occur in southern regions. Local outbreaks in Yulin and Hohhot overwhelmed regional healthcare facilities with hundreds to thousands of pediatric patients within hours. TA requires three essential conditions: high aeroallergen levels, thunderstorm activity, and sensitized populations. Updrafts carry pollen aloft; humidity and lightning fragment pollen into respirable micro-particles. Downbursts transport these fragments to ground level, penetrating the lower airways, activating IgE-mediated mast cell degranulation, and inducing type 2 airway inflammation, bronchoconstriction, and mucus overproduction. Symptoms peak 3-8 hours after thunderstorms and are often preceded by allergic rhinitis. Severe cases may develop silent lung or subcutaneous emphysema. In Chinese cohorts, 56%-60% of affected children have no prior asthma diagnosis, while over 94% demonstrate pollen sensitization. Boys without inhaled corticosteroid prophylaxis carry higher risks of severe exacerbations. Prevention combines individual interventions and population-based public health measures. Pre-season anti-inflammatory therapy, biologics and allergen immunotherapy reduce individual risks. Broader strategies include pollen-meteorology early warning systems, hospital surge capacity planning and community health education. As climate instability intensifies, ETSA will become more frequent. Clinicians should screen undiagnosed pollen-sensitized children for airway vulnerability. Public health systems need integrated surveillance, early warning and emergency response frameworks to mitigate climate-related pediatric respiratory hazards.

Keywords
Thunderstorm asthma; climate change; pollen; children; epidemiology; prevention.

Synopsis

31 Oct, Saturday

Parallel Symposium 1: Asthma

Real-World Outcomes of Dupilumab in Children with Multiple Allergic Diseases

Levina J.[1,2], *Efendieva K.*[1,2], *Levin P.*[3], *Namazova-Baranova L.*[1,2,4]

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[2]*Pirogov Russian National Research Medical University, Moscow, Russia*

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[4]*Shenzhen MSU-BIT University, China*

Background

Severe atopic dermatitis is a known risk factor for atopic multimorbidity. These children frequently go on to develop asthma, allergic rhinitis, food allergy or even eosinophilic esophagitis. Conventional therapies like topical steroids are often ineffective in moderate-to-severe cases and do not modify the underlying disease process. The study aimed to access the efficacy and safety of dupilumab treatment in children with atopic dermatitis and multiply allergic comorbidities.

Patients and Methods

The study included 30 children (median age 9.4 [IQR 4.6–14.1] years), 63% male with moderate-to-severe atopic dermatitis and at least one additional allergic disease. All patients received dupilumab for a minimum of 16 weeks. Clinical outcomes were measured using standardized instruments, including SCORAD, EASI and CDLQI). Biomarker analysis included serum levels of TARC/CCL17, VEGF, DPP-4, periostin, blood eosinophils (Eos) and fractional exhaled nitric oxide (FeNO), measured at baseline and at week 16.

Results

A rapid clinical response was observed with median SCORAD and EASI scores decreasing by 2- to 3-fold. By week 4, the majority of patients (80%) had achieved EASI50, more than half (53%) - EASI75, 20% - EASI90. By week 16 significant improvement was confirmed: median SCORAD decreased from 54 to 12 ($p<0.001$), median EASI - from 18 to 2, CDLQI dramatically improved from 12 to 2 points ($p=0.001$). By week 16 the EASI90 response rate had further increased to 70%. Among biomarkers, along with clinical improvement, serum levels of TARC/CCL17 significantly decreased by 72% ($p<0.001$). Levels of VEGF and periostin showed a decreasing trend, while DPP-4 remained stable. Treatment also led to reduced airway inflammation (FeNO decreased from 23 to 15 ppb, $p=0.046$). Median Eos did not change significantly ($p=0.643$). Adverse events were rare (injection-site reactions in 17%), conjunctivitis was observed in 7% of patients. The frequency of acute respiratory infection episodes did not increase during treatment.

Conclusion

In children with atopic dermatitis and multiply allergic comorbidities, dupilumab shows rapid, significant, and sustained clinical improvement, accompanied by clear biomarker changes - particularly in TARC/CCL17. These findings support personalized therapy approach and highlight the potential of biomarkers for treatment prediction and monitoring. We are currently expanding our cohort to 45 children and continuing follow-up to better characterize long-term outcomes.

Synopsis

31 Oct, Saturday

Parallel Symposium 2: Mahesh Babu Ramamurthy Memorial

Hypoxic Burden – Is it Ready for Use in Childhood Obstructive Sleep Apnoea?

Professor Albert MC Li, Hong Kong SAR

Although polysomnography (PSG) remains the diagnostic standard for paediatric sleep disorders, problems in convenience, comfort, throughput, and healthcare costs remain. Assessment tools that complement PSG to characterise the disease more precisely, or even serve as an alternative to PSG, which could translate into individual- and system-level benefits, are welcome. Hypoxic burden (HB) has been a trendy keyword in recent adult and paediatric OSA studies. A lesser-known but emerging metric is the oxygen desaturation burden index (OBI), specifically developed for children with OSA, with simplicity and automation as its key features. Their accuracy in diagnosing OSA, their association with OSA consequences, and their ability to predict treatment response are of interest. This talk will illustrate the potential clinical utility of hypoxia measurements, such as HB and OBI, in children with OSA, using published studies and pilot data from our group, and discuss their limitations.

Synopsis

31 Oct, Saturday

Parallel Symposium 2: Mahesh Babu Ramamurthy Memorial

Dental Intervention for Childhood Obstructive Sleep Apnoea – What is the Longer-term Outcome?

Dr. Michael TK Chao, Hong Kong SAR

This presentation will explore the risk factors for OSA in Asian children and the role of dentists and orthodontists in identifying and managing these underlying craniofacial features. Orthodontic approaches such as maxillary expansion and their effects on the upper airway and sleep-disordered breathing.

Beyond treating OSA during childhood, an important question is whether early intervention during craniofacial growth can influence the long-term trajectory of airway health and potentially reduce the risk of OSA in adulthood.

This presentation will review the current evidence and consider how early dental intervention may contribute to a lifelong approach to OSA prevention.

Synopsis

31 Oct, Saturday

Parallel Symposium 2: Mahesh Babu Ramamurthy Memorial

Phenotyping Childhood Obstructive Sleep Apnoea Syndrome – A New Standard?

Dr. Chien-Heng Lin, Taichung City, Taiwan
Co-authors: Dr. Liang-Wen Hang and Dr. Liang-Wen Hang

Childhood obstructive sleep apnoea syndrome (OSAS) is a heterogeneous disorder traditionally characterized by clinical phenotypes and polysomnographic severity, particularly the apnoea-hypopnoea index (AHI). However, children with similar AHI values may differ substantially in underlying mechanisms, clinical consequences, and treatment responses, highlighting the limitations of an AHI-centered approach.

Four key physiological endotypes – upper airway collapsibility, arousal threshold, ventilatory control instability (loop gain), and upper airway muscle compensation – provide a mechanistic framework for understanding OSA beyond conventional phenotypes. Their application to children is challenging because airway anatomy, neuromuscular control, craniofacial development, obesity, and ventilatory regulation evolve with growth and maturation.

Recent computational approaches allow these traits to be estimated non-invasively from routine polysomnography. In our cohort of 88 children and adolescents with OSA, impaired muscle compensation, greater airway collapsibility, and higher loop gain were associated with increasing OSA severity. Older children also demonstrated greater collapsibility and higher loop gain, suggesting age-related evolution of OSA pathophysiology.

Endotyping may help explain heterogeneous responses to adenotonsillectomy and support a shift toward mechanism-based, individualized treatment rather than treatment guided primarily by AHI severity. However, pediatric normative values, age-specific thresholds, reproducibility, and treatment-linked cut-offs remain to be established.

This presentation will explore the transition from phenotype to endotype and examine whether physiological endotyping can become clinically measurable, prognostically meaningful, and therapeutically actionable in childhood OSAS. Endotyping is not yet the new standard – but it may help define the next one.

Synopsis

31 Oct, Saturday

Parallel Symposium 3: Technology Dependent Children

Rewriting the Natural History: Respiratory Care in SMA and Duchenne in the Era of Genetic Therapies

Professor Omendra Narayan, UAE

Ten years ago, a child with SMA type 1 was unlikely to reach a second birthday without permanent ventilation, and boys with Duchenne could expect a steady fall in lung function through their teens. That picture has changed, though not evenly. In SMA, nusinersen, risdiplam and intravenous onasemnogene abeparvovec, especially after newborn screening, have given us children who sit, some who walk, and many who breathe without support. The past year has added intrathecal onasemnogene for patients aged two and over, and apitegromab, the first muscle-targeted therapy, as an add-on to SMN2-directed treatment. Yet many treated children still have bulbar weakness, sleep-disordered breathing and a need for night-time NIV. In Duchenne, vamorolone and givinostat have joined corticosteroids and exon-skipping drugs, while micro-dystrophin gene therapy has been tempered by fatal liver injury, a boxed warning and restriction to ambulant boys. Whether any of these agents change the slope of FVC decline is still largely unanswered.

This talk summarises the new therapies, looks honestly at what they have and have not done for the lungs, and sets out how surveillance, sleep studies, airway clearance and ventilation planning need to adapt for this new generation of patients.

Synopsis

31 Oct, Saturday

Parallel Symposium 3: Technology Dependent Children

Transition from Invasive to Non-invasive Ventilation: When and How

Prof. Aroonwan Preutthipan, Thailand

Compared with invasive home ventilation via tracheostomy, noninvasive ventilation (NIV) offers several advantages. It avoids tracheostomy-related complications and routine tracheostomy care, may facilitate speech and communication, and allows greater freedom in daily activities. In appropriately selected children, NIV may also reduce caregiver burden and improve quality of life while maintaining effective respiratory support. As children grow, continued lung growth and improvement in the underlying condition may allow ventilatory support to be discontinued or reduced from 24-hour support to support only during sleep. Some children remain ventilator-dependent but can transition from tracheostomy ventilation to NIV.

Key considerations for successful transition include clinical stability, upper airway patency, adequate airway protection, effective secretion clearance, mask tolerance, and the readiness of both the patient and caregivers. Drawing on published weaning strategies and our clinical experience[1], a stepwise approach includes airway evaluation, tracheostomy tube downsizing when appropriate, supervised capping trials, mask fitting, and acclimatization to NIV. Polysomnography with carbon dioxide monitoring is particularly useful for assessing the effectiveness of bilevel positive airway pressure (BiPAP) delivered via a face mask and titrating settings to ensure adequate ventilation and oxygenation during sleep. This is followed by planned decannulation and subsequent monitoring, either at the bedside or by polysomnography. Published studies in children with congenital central hypoventilation syndrome support the feasibility of this approach in carefully selected patients[2,3].

Three children in our home ventilation program have successfully transitioned from tracheostomy ventilation to NIV: two with congenital central hypoventilation syndrome (CCHS) and one with bronchopulmonary dysplasia (BPD). The two children with CCHS continued to require nighttime NIV after decannulation. The child with BPD was successfully weaned from invasive ventilation but subsequently required intermittent NIV during episodes of pneumonia and asthma exacerbation. These cases illustrate the role of NIV both as ongoing long-term support and as temporary respiratory support during acute illness.

Transition should be individualized according to the underlying disease, airway function, ventilatory needs, and family circumstances. Careful preparation, multidisciplinary collaboration, and continued reassessment are essential to providing effective respiratory support while reducing the burden on children and their families.

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Synopsis

31 Oct, Saturday

Parallel Symposium 3: Technology Dependent Children

Hospital to Home Ventilation

Dr. Ka-Ka Siu, Hong Kong SAR

Paediatric home ventilation is an expanding area of care as more children with complex respiratory needs survive to live at home. This presentation offers a clinician's perspective on transitional care, family preparedness, and emerging Asia-Pacific models, with a focus on why hospital-to-home transfer should be understood as a longitudinal process rather than a single discharge event. It will examine the spectrum of technology-dependent children requiring home ventilation and discuss the key elements of safe transition: clinical stability, caregiver competence, home readiness, and multidisciplinary coordination. The talk will also highlight the realities families face after discharge, including ongoing learning, emergency preparedness, and barriers related to home nursing, equipment, and care coordination. Using Hong Kong as a local example, the session will show that home ventilation is feasible in the community even where in-home nursing is limited, while also highlighting the need for local service planning and better transition to adult care as survival improves. It will also draw on regional experience from across Asia-Pacific, including structured follow-up, nurse-led integrated services, and telemedicine-supported care, to consider how collaboration may strengthen future discharge pathways and long-term support for this growing population.

Synopsis

31 Oct, Saturday

Parallel Symposium 3: Technology Dependent Children

Common Mistakes, Unmet Needs and Adaptation at Home Unknown to Hospital Staff

Ms. Sheila Kun, USA

Caring for technology dependent children is challenging and costly. Complex technology and being the solo practitioner post barriers for caregivers in the home settings unknown to hospital staff. This presentation profiles common mistakes, unmet needs and adaptations at home for children on home mechanical ventilation (HMV). Response to ventilator alarm is frightening as hospital ventilators are usually connected to its own alarm system. Home ventilator alarms might not be set properly and parents usually do not have much time to practice. This common mistake is confirmed by Kun et al. in her research on the knowledge of caregivers on home emergencies. B. Truitt also reported an incidence of 87% of tracheostomy related emergency (TRE) in the home within 6-month post discharge. And she further noted that almost half of the caregivers did not return demonstrate well to TRE. This prompted the need for periodic review prn by clinicians on TRE in the out-patient setting. Details of the use and maintenance of durable medical equipment (DME) is an area that needs more focused training; their functions, battery preservation, and portability issues. Close DME vendor follow up and telehealth visits might mitigate adverse outcomes. School integration is another barrier that requires strategic intervention from the clinicians to enhance the educational opportunity for our HMV patients; establishing trust and balancing between resources vs. actual needs. Accompanying their health journey requires active listening, partnering and exploring health options together. A productive life is intricately woven in the fabric of successful adaptation to the new norm, a well-designed comprehensive training program and in a community that offers adequate resources with respect and dignity. Advocacy on unmet needs is an on-going endeavor that propels our HMV children to thrive.

Synopsis

31 Oct, Saturday

Keynote Lecture 3

What Happens to a Child with Obstructive Sleep Apnoea in Adulthood – A Cardiovascular Perspective

Dr. Kate CC Chan, Hong Kong SAR

Obstructive sleep apnoea (OSA) in childhood is associated with neurobehavioural and cardiovascular morbidities, although its cardiovascular effects are often subtle and subclinical. This presentation will review the cardiovascular consequences of paediatric OSA, including its associations with elevated blood pressure, hypertension, and cardiac remodelling. Drawing on nearly two decades of follow-up data from the Hong Kong Child Sleep Cohort, the talk will examine the long-term trajectories of childhood OSA and their implications for cardiovascular health in adulthood. Longitudinal findings demonstrate that a substantial proportion of childhood OSA persists into adult life, particularly among males and individuals with obesity. Persistent OSA is associated with less favourable cardiovascular outcomes, including higher ambulatory blood pressure, reduced nocturnal blood pressure dipping, and evidence of early cardiac remodelling. The complex interplay between OSA, body weight, and cardiovascular health across the life course will also be discussed. These findings suggest that childhood OSA persisting into adulthood may have lasting cardiovascular consequences. As persistent OSA remains common, even after first-line adenotonsillectomy, improved strategies for long-term follow-up and management are essential to reduce future disease burden.

Synopsis

31 Oct, Saturday

Keynote Lecture 4

Year in Review: Paediatric Respiratory Medicine
Professor Anne Goh, Singapore

This will cover articles spanning respiratory medicine published in 2026. It highlights the importance of managing paediatric respiratory diseases well as the impact of disease on the developing lung has long term consequences on future adult lung health and the development of chronic obstructive pulmonary disease (COPD).

It will cover some topics of asthma prevention ranging from simple public health measures to identification of biomarkers and better management of asthma with adequate medications.

It will also look at sleep and obesity. The relation between obstructive sleep apnea and obesity as well as sleep duration and timing with obesity development as well as risk factors to identify children for obstructive sleep apnea.

Respiratory infections are common in young children especially viral infections. Bacterial colonization is frequently found on the nasopharynx of these young children. Presence of these bacteria is not an indication to prescribe antibiotics as they may not reflect severity of the respiratory disease. Risk factors for recurrent respiratory infection in preschool children include exposure to cigarette smoke, having asthma, frequent snacking. Hence preventive measures include simple life style changes such as avoidance of cigarette smoke, healthy eating and better management of asthma.

A review of pulmonary fibrosis in children and the role of antifibrotic drugs for this condition.

Finally the impact of climate change on respiratory health in children will be reviewed.

Synopsis

1 Nov, Sunday

Keynote Lecture 5

Diagnosis and Management in Primary Ciliary Dyskinesia

Professor Bulent Karadag, Turkey

Primary ciliary dyskinesia (PCD) is a heterogeneous inherited disorder of motile cilia that requires coordinated diagnostic assessment and lifelong multidisciplinary care. This lecture will review the pathway from clinical suspicion to diagnostic confirmation and discuss a practical approach to management in children and adolescents.

The diagnostic discussion will begin with recognition of characteristic clinical features, including unexplained neonatal respiratory distress in term infants, persistent wet cough, chronic nasal symptoms, and laterality abnormalities. The complementary roles of nasal nitric oxide measurement, high-speed video microscopy, transmission electron microscopy, immunofluorescence, and genetic testing will be examined. Particular attention will be given to test limitations, discordant findings, and the assessment of patients with a convincing clinical phenotype but inconclusive investigations. Challenges in young children and in settings with limited access to specialist testing will also be considered.

Management will be addressed through an integrated approach to preserving lung function, reducing exacerbations, and supporting daily life. Topics will include individualized airway clearance, physical activity, microbiological surveillance, treatment of respiratory exacerbations, and the selective use of long-term antibiotics. The lecture will also discuss upper airway disease, hearing impairment, nutritional assessment, and transition to adult services. The evidence supporting these interventions will be considered alongside areas where practice relies on expert consensus or extrapolation from other chronic airway diseases.

The final section will explore genotype–phenotype relationships, variation in disease progression, and emerging therapeutic approaches. Throughout the lecture, emphasis will be placed on translating diagnostic findings into an individualized care plan, recognizing deterioration early, and setting meaningful treatment goals with patients and families.

Synopsis

1 Nov, Sunday

Parallel Symposium 4: Respirology

Mapping the Vascular Obstruction in the Airway – An Integrated Approach

Dr. Carol WK Ng, Hong Kong SAR

Vascular compression is an important cause of airway obstruction in children. This case-based presentation explores vascular rings, pulmonary artery slings and other cardiovascular causes of tracheobronchial compression, highlighting their anatomical relationships and associated airway abnormalities. Emphasis is placed on CT assessment of the site, severity and extent of airway narrowing, alongside identification of associated tracheobronchial anomalies and downstream pulmonary changes. An integrated assessment of vascular and airway anatomy, interpreted in the clinical context, guides multidisciplinary treatment planning.

Synopsis

1 Nov, Sunday

Parallel Symposium 4: Respirology

Management of Central Airway Obstruction in Children

Professor Sarabon Tahura, Bangladesh

Central airway obstruction in children is a potentially life-threatening condition that may result from congenital airway abnormalities, acquired tracheal or subglottic stenosis, granulation tissue, foreign body aspiration, endobronchial tumors and post-intubation airway injury. Clinical manifestations range from persistent stridor, wheezing, recurrent pneumonia and respiratory distress to critical airway compromise. Early diagnosis and appropriate intervention are essential to prevent irreversible airway damage and reduce morbidity and mortality. Flexible bronchoscopy plays an increasingly important role in the diagnosis and management of pediatric central airway obstruction by enabling direct visualization of the airway, assessment of the site and severity of obstruction, and guidance for therapeutic interventions.

Depending on the underlying pathology, bronchoscopic treatment options include foreign body extraction, balloon bronchoplasty, mechanical debulking, endobronchial electrocautery, argon plasma coagulation (APC), cryotherapy and selected airway stenting procedures. These techniques can restore airway patency, improve ventilation and potentially avoid or reduce the need for open surgical procedures. A case-based approach using real clinical scenarios can demonstrate the practical application of these interventions, highlighting patient selection, procedural techniques, decision-making, challenges, complications and clinical outcomes. However, pediatric airway intervention remains challenging because of the small airway diameter, limited respiratory reserve, risk of bleeding and airway edema, and the need for specialized equipment and expertise.

Successful management of central airway obstruction requires careful pre-procedural assessment, appropriate anesthesia and ventilation strategies, advanced bronchoscopic skills, and close collaboration among pediatric pulmonologists, anesthesiologists, otolaryngologists and pediatric surgeons. Individualized treatment based on the underlying pathology and severity of obstruction is essential to optimize outcomes and minimize complications. With increasing expertise in pediatric interventional bronchoscopy, many children can achieve effective airway restoration and improved clinical outcomes. Establishing dedicated pediatric interventional pulmonology services is therefore crucial to expanding access to these potentially life-saving procedures, particularly in resource-limited settings.

The presentation will also emphasize the importance of multidisciplinary collaboration, appropriate anesthesia and ventilation strategies and individualized procedural planning based on real case discussion, aim to strengthen clinical decision-making and promote the safe and effective application of pediatric interventional bronchoscopy, particularly in resource-limited settings.

Synopsis

1 Nov, Sunday

Parallel Symposium 4: Respirology

Heated Humidified High Flow – A Pragmatic Approach

Professor Andreas Schibler, Australia

Background

Heated humidified high-flow nasal cannula (HFNC) is used across emergency departments, general wards, transport services and paediatric intensive care. Its effects depend on the patient's physiology and clinical setting, and it should not be treated as interchangeable with continuous positive airway pressure (CPAP).

Aim

To present a pragmatic approach to selecting and using HFNC for infants and children with acute respiratory illness.

Approach

This presentation reviews the physiological rationale for HFNC, including inspiratory flow support, dead-space washout, gas conditioning and variable airway pressure. It applies these principles to bronchiolitis and acute hypoxaemic respiratory failure, with emphasis on initial severity assessment, oxygen thresholds, work of breathing, response to treatment and escalation. It also considers how staffing, equipment and monitoring affect support decisions in regional and tertiary hospitals, and discusses HFNC in intensive care, including around extubation. The presentation identifies areas where evidence remains limited, including the optimal support modality for specific patient groups and the role of HFNC in inhaled drug delivery.

Conclusion

HFNC can be incorporated into a practical respiratory support pathway across multiple care settings. Decisions should be guided by the child's clinical features, response over time and the capability of the treating service, with clear criteria for reassessment, escalation and transfer. Further evidence is needed to determine which children benefit most and how HFNC compares with other non-invasive support strategies in specific settings.

Synopsis

1 Nov, Sunday

Parallel Symposium 5: Respiratory Syncytial Virus

Protecting Infant from Respiratory Syncytial Virus
Dr. Kate CC Chan, Hong Kong SAR
(Lecture sponsored by Sanofi)

Respiratory syncytial virus (RSV) is a leading cause of lower respiratory tract infection and hospitalisation in infants worldwide. This presentation will review current strategies for RSV prevention, with a particular focus on nirsevimab, a long-acting monoclonal antibody. Evidence from pivotal clinical trials and real-world studies will be discussed, highlighting its effectiveness in reducing RSV-associated hospitalisations and severe disease. The talk will also explore potential additional benefits of RSV prophylaxis, including reductions in respiratory morbidity and recent observational evidence suggesting a lower risk of hospitalisation for invasive pneumococcal disease. Finally, the role of maternal RSV vaccination as a strategy for infant protection will be reviewed. This session will provide an update on the evolving landscape of RSV prevention and its implications for clinical practice.

Synopsis

1 Nov, Sunday

Parallel Symposium 5: Respiratory Syncytial Virus

Medical Treatment of Respiratory Syncytial Virus Bronchiolitis – Evidences and Controversies

Dr. Wa-Keung Chiu, Hong Kong SAR

Despite the advance in development of medicine, supportive care is the only effective medical treatment of Respiratory Syncytial Virus (RSV) bronchiolitis. Decades of clinical studies show no routine benefit for traditional respiratory medications. International guidelines in fact actively discourage the routine use of pharmacological interventions due to a lack of efficacy and potential side effects. However, majority of clinical paediatrician continue to use the unproven treatment in daily clinical practice.

Evidences: Supportive Care

Supportive management is the only intervention with clear evidence of benefit.

Oxygen

Supplemental oxygen is indicated when oxygen saturation persistently drops below 90% to 92%.

Hydration

Oral feeding is unsafe when the infant's respiratory rate is above 60 per minutes. Fluids supplement should be given via nasogastric tube or intravenous lines.

Nasal Suctioning

Infants are obligate nasal breather, superficial suctioning clears the upper airway to improve patency and facilitate easier feeding in congested infants

Controversies: Ineffective Pharmacotherapy

There is a major discrepancy between established medical evidence and actual clinical practice in using various medications.

Bronchodilators

Bronchodilators do not improve oxygen saturation, do not reduce hospital admission after outpatient treatment, do not shorten the duration of hospitalization and do not reduce the time to resolution of illness at home.

Corticosteroids (Systemic or Inhaled)

Current evidence does not support a clinically relevant effect of systemic or inhaled glucocorticoids on admissions or length of hospitalisation.

Nebulized Epinephrine

It fails to show long-term significance in altering the disease course, though it may provide a minor, short-term reduction in ED admissions.

Nebulized Hypertonic Saline (3%)

May reduce the length of stay only in hospital settings where the average baseline stay is exceptionally long (exceeding 3 days). The certainty of the evidence was low to very low for all outcomes, mainly due to inconsistency and risk of bias.

Antibiotics

Secondary bacterial infections occur in less than 1% to 1.2% of severe RSV cases, rendering empirical antibiotics useless.

Antivirals and Immunotherapies

Ribavirin

This is the only FDA-approved antiviral for severe RSV. However, routine use of the drug is not recommended. When clinical symptoms appear, the peak viral replication has passed, leaving only the inflammatory response. Its use is strictly reserved for highly specific, severe cases in immunocompromised patients.

Monoclonal Antibodies

Palivizumab and Nirsevimab are highly effective at preventing severe infection in high-risk, premature infants. Their uses are for prevention of infection only and have no therapeutic value once acute bronchiolitis has already set in.

Synopsis

1 Nov, Sunday

Parallel Symposium 5: Respiratory Syncytial Virus

Beyond the Bronchiolitis Season: The Long Shadow of Infant Respiratory Syncytial Virus Infection

Professor Omendra Narayan, UAE

For many families, RSV bronchiolitis does not end at discharge. A sizeable proportion return with recurrent wheeze through the preschool years, and long-running cohorts from Sweden and Tucson have linked severe infant RSV to asthma and airflow obstruction into adolescence. The harder question has always been causation: does RSV injure a healthy airway, or does it unmask a lung that was already vulnerable? Recent work has moved that debate on. In the INSPIRE birth cohort, children who escaped RSV in their first year had a lower risk of asthma at five years, and in the MAKI trial palivizumab reduced wheezing days in late-preterm infants, though without a clear effect on physician-diagnosed asthma at six. Life-course data now link early lower respiratory infection to poorer adult lung function and premature respiratory death. Post-infectious bronchiolitis obliterans is a different matter: RSV alone is rarely implicated, the evidence is limited to case series, and adenovirus remains the main culprit.

Using real cases, this talk works through that evidence, looks at the burden on families and health systems, including local data, and asks what long-acting monoclonals and maternal vaccination may mean for the next generation of lungs.

Synopsis

1 Nov, Sunday

Parallel Symposium 6: Cystic Fibrosis

Overcoming the Diagnosis Challenges
Professor Sushil Kabra, India

Synopsis

1 Nov, Sunday

Parallel Symposium 6: Cystic Fibrosis

Cystic Fibrosis – A Tale of Two Cities

Assoc. Professor Harutai Kamalaporn, Thailand and Dr. Ka-Ka Siu, Hong Kong SAR

Cystic fibrosis in Asia remains under-recognised, with small reported case numbers likely reflecting underdiagnosis rather than true rarity. This round-table will explore the local experience of cystic fibrosis care in Hong Kong and Thailand, focusing on patient numbers, age at presentation, clinical features, and the practical barriers faced in everyday care.

The discussion is grounded in the shared Asian experience of increasing clinical awareness, expanding access to sweat testing and genetic analysis, and mutation profiles that offer unique insights compared to Western populations. It will also highlight the potential for stronger registries, regional collaboration, and more equitable access to specialist care and CFTR modulators across emerging care settings.

By bringing together perspectives from two cities with small but important patient populations, this session aims to raise awareness, share local experiences, and stimulate discussion with international experts on how CF care can be strengthened in settings where resources, experience, and treatment access are still developing.

Synopsis

1 Nov, Sunday

Parallel Symposium 6: Cystic Fibrosis

Achieving Optimal Cystic Fibrosis Management

Professor Bulent Karadag, Turkey

Optimal cystic fibrosis (CF) management requires a coordinated, lifelong approach that addresses pulmonary disease, nutrition, extrapulmonary complications, and psychosocial well-being. This presentation will explore how multidisciplinary teams can translate these priorities into individualized care for children and adolescents, while responding to the opportunities and challenges of CFTR modulator therapy.

The discussion will follow the patient journey from diagnosis through adolescence, highlighting early assessment, appropriate introduction of disease-modifying treatment, and regular review of clinical progress. Core elements will include airway clearance, physical activity, nutritional support, pancreatic enzyme replacement, and surveillance for CF-related complications. Emphasis will be placed on integrating these interventions into a feasible daily routine that reflects the child's developmental stage and the family's priorities.

A central theme will be how to assess treatment success beyond spirometry. Growth, exacerbations, symptoms, sensitive measures of lung disease, quality of life, and participation in everyday activities will be considered as complementary outcomes. The presentation will also examine how to approach persistent disease despite modulator therapy and how to evaluate requests to simplify treatment when clinical health improves.

Adherence, mental health, shared decision-making, and preparation for transition to adult care will be addressed as essential components of effective management. Differences in access to medicines, diagnostic resources, and specialist services will inform the discussion of practical care priorities.

The overall aim is to provide a framework for proactive, personalized CF care that preserves organ function, reduces avoidable treatment burden, and supports long-term health and independence.

Synopsis

1 Nov, Sunday

Parallel Symposium 6: Cystic Fibrosis

Cystic Fibrosis in Chinese Children

Professor Li-Wei Gao, Beijing, China
Co-authors: Professor Bao-Ping Xu and Professor Kun-Ling Shen

Cystic fibrosis (CF) is a rare disease in China and was included in the first batch of the National Rare Disease Catalog in 2018. Unlike Caucasian populations, Chinese children with CF exhibit significant heterogeneity in *CFTR* mutation spectrum, clinical manifestations, and diagnostic accessibility. This report, based on the *Expert Consensus on the Diagnosis and Treatment of Cystic Fibrosis in Chinese Children (2022 Edition)* and recent domestic pediatric cohort studies, outlines the core diagnostic status and key challenges of pediatric CF in China.

The reported prevalence of CF in China is approximately 1/120,000, with a carrier frequency of about 1/167–1/190, suggesting that the actual number of patients far exceeds reported cases. The number of cases reported in the past decade exceeds 2.5 times the total of the preceding 30 years, indicating improved recognition.

Domestic pediatric cohorts show that recurrent wet cough and chronic pneumonia are present in nearly all patients, with bronchiectasis, chronic sinusitis, malnutrition, and steatorrhea as prominent manifestations. Regarding pathogens, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Haemophilus influenzae* are the most commonly isolated organisms. A Distinctive CFTR Mutation Spectrum was reported that p.Gly970Asp is the most common variant in Chinese patients, whereas p.Phe508del – the dominant pathogenic mutation in Europe and North America – is rare. The Chinese CFTR landscape therefore diverges markedly from that of Caucasian populations, making a Chinese-specific screening panel necessary and comprehensive genetic analysis indispensable.

Because sweat chloride testing is not widely accessible across China, a substantial proportion of pediatric CF diagnoses rest primarily, and sometimes exclusively, on genetic testing. But the variant spectrum differs so substantially from that of Caucasian populations, many variants identified in Chinese patients are either absent from established databases or classified as variants of uncertain significance, making it often difficult to definitively determine pathogenicity. Relying solely on genetic testing and clinical features therefore risks missed diagnoses. Sweat chloride testing should be pursued whenever feasible, because functional confirmation anchors the diagnosis and guards against both overdiagnosis of uncertain variants and underdiagnosis of non-classical genotypes.

Synopsis

1 Nov, Sunday

Parallel Symposium 7: Skin and Allergy

Topical JAK Inhibitors Changing Dermatology Practice

Professor Steven Thng, Singapore

Background

Janus kinase (JAK)-signal transducer and activator of transcription signalling integrates multiple cytokine pathways central to cutaneous inflammation, itch and melanocyte autoimmunity. Topical JAK inhibitors provide targeted pathway modulation at the site of disease, with rapid onset and substantially lower systemic exposure than oral therapy. Their emergence is changing treatment algorithms across inflammatory and pigmentary dermatoses, particularly when corticosteroid toxicity, treatment-site sensitivity or the need for long-term disease control limits conventional topical therapy.

Objective

To review the clinical role of topical JAK inhibitors in atopic dermatitis (AD), difficult-to-treat and special-site dermatoses, prurigo nodularis (PN) and vitiligo, and to consider their implications for dermatology practice.

Discussion

Ruxolitinib cream, a topical JAK1/JAK2 inhibitor, has demonstrated rapid reduction in itch and clinically meaningful improvement in mild-to-moderate AD, offering a non-steroidal option for short-term control and intermittent longer-term management. Topical JAK inhibition is especially attractive for sensitive or functionally important sites where repeated corticosteroid exposure is problematic. Evidence is expanding in head-and-neck dermatitis, moderate-to-severe chronic hand eczema prurigo nodularis as well as in treatment of vitiligo. This talk will focus on the indications of topical Jak inhibitors in these conditions, with special focus on real world data of the use of topical Jaks, response rates, when and for how long the treatment should me.

Keywords

Topical JAK inhibitors; Ruxolitinib; Atopic dermatitis; Chronic hand eczema; Head-and-neck dermatitis; Prurigo nodularis; Vitiligo.

Synopsis

1 Nov, Sunday

Parallel Symposium 7: Skin and Allergy

Perinatal and Early Nutritional Determinants of Paediatric Allergic Diseases: Findings from a Russian Cohort Study

Efendieva K.[1,2], *Levina J.*[1,2], *Namazova-Baranova L.*[1,2,3]
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Background
The rising prevalence of food allergy (FA) worldwide highlights the need to better understand early-life factors associated with its development. This study aimed to evaluate associations between infant feeding practices, perinatal factors, and FA in children aged 0-2 years in a large Russian cohort.

Methods
We conducted a retrospective analysis of nationwide parent-reported survey data collected in 2019-2024. The study included 12.695 children aged 0-2 years (Me 16.2 (IQR 8.2-24.4), 50.5% boys; FA status was available for 12.538 children, including 1.471 children with FA and 11.067 without FA. Infant feeding practices, timing of breastfeeding, formula feeding and complementary feeding, birth characteristics, and perinatal factors were analyzed. Group comparisons were performed using χ^2 and Mann-Whitney tests, with correction for multiple comparisons. Multivariable logistic regression was used to identify factors independently associated with FA.

Results
Children with FA were less likely to have ever been breastfed than children without FA (55.9% vs. 63.4%; OR 0.73, 95% CI 0.66-0.82; q<0.001) and were less likely to be currently breastfed among those who had received breast milk (50.1% vs. 60.0%; OR 0.67, 95% CI 0.58-0.77; q<0.001). Formula feeding was more common in children with FA (51.9% vs. 46.1%; OR 1.26, 95% CI 1.13-1.41; q<0.001). Complementary feeding had been introduced more frequently in children with FA (87.4% vs. 77.0%; OR 2.06, 95% CI 1.75-2.42; q<0.001), whereas the median age at its introduction did not differ between groups (6.0 [5.0-7.0] months in both groups; q=0.982). Preterm birth (8.1% vs. 5.6%; OR 1.49, 95% CI 1.21-1.82; q<0.001) and complications during delivery (9.0% vs. 4.6%; OR 2.03, 95% CI 1.66-2.48; q<0.001) were more frequent among children with FA. Maternal smoking during pregnancy and birth weight were not associated with FA. Birth length showed only a weak difference between groups that was not significant after correction for multiple comparisons (q=0.067). In multivariable analysis (N=12.181; 1.430 FA cases), delivery complications showed the strongest independent association with FA (aOR 1.95, 95% CI 1.58-2.42; p<0.001), followed by complementary feeding (aOR 1.64, 95% CI 1.37-1.96; p<0.001) and preterm birth (aOR 1.32, 95% CI 1.06-1.65; p=0.014). Older age at assessment (aOR per month 1.02, 95% CI 1.01-1.03; p<0.001) and greater birth length (aOR per cm 1.02, 95% CI 1.00-1.04; p=0.013) showed modest independent associations with FA. In contrast, previous or current breastfeeding, formula feeding, and sex were not independently associated with FA after adjustment.

Conclusion
In this large Russian cohort of children aged 0-2 years, delivery complications, preterm birth, and complementary feeding were independently associated with higher odds of FA. Associations observed for breastfeeding and formula feeding in unadjusted analyses were attenuated after multivariable adjustment. Although complementary feeding remained independently associated with FA, the median age of its introduction was identical in children with and without FA, suggesting that this finding should not be interpreted as evidence of a causal effect of complementary feeding itself. As the original survey did not assess the timing or composition of specific allergenic food introduction, further prospective studies with detailed assessment of early feeding practices are needed to clarify these associations.

Synopsis

1 Nov, Sunday

Parallel Symposium 7: Skin and Allergy

Integrative Medicine for Children Atopic Diseases

Dr. Ellis KL Hon, Hong Kong SAR

Atopic diseases present a premier opportunity for an integrative medicine approach, as managing conditions like atopic dermatitis and asthma requires a careful blend of conventional therapies and complementary modalities. In Hong Kong, the healthcare landscape features unique examples of both non-integration and pseudo-integrative medicine, where parallel usage of Western treatments and Traditional Chinese Medicine (TCM) occurs without true clinical coordination, often leading to fragmented patient care. To streamline and optimize management, this paper introduces the "ABC" approach as a structured framework for clinical practice.

For atopic dermatitis, the model organizes care into three core components: A represents the Avoidance of triggers such as environmental allergens; B focuses on Barrier therapy to restore skin integrity, supplemented by Biologics for severe cases; and C encompasses comprehensive Counselling regarding proper application of Creams, judicious use of topical Corticosteroids and Calcineurin inhibitors, addressing Compliance issues, and navigating Complementary and Alternative Medicine (CAM), including Chinese medicine.

Similarly, for asthma, the framework adapts seamlessly to guide patient care: A dictates the Avoidance of environmental triggers; B prioritizes the use of fast-acting Bronchodilators for acute symptom relief; and C emphasizes vital Counselling on adherence to Combined Corticosteroid and LABA inhalers, addressing treatment Compliance, and integrating CAM and Chinese medicine safely. By adopting this unified framework, clinicians can transcend the pitfalls of pseudo-integration seen locally. The ABC approach equips healthcare providers in Hong Kong with a memorable, comprehensive system to safely merge evidence-based conventional treatments with complementary therapies, ultimately improving compliance and patient outcomes.

Synopsis

1 Nov, Sunday

Parallel Symposium 8: Critical Care Medicine

A Novel Respiratory Support for Resuscitation: Soong's Ventilation

Professor Wen-Jue Soong, Taichung City, Taiwan

Traditional cardiopulmonary resuscitation (CPR), especially for doing resuscitative ventilation, may involve using airway and ventilation devices such as bag-valve-mask (BVM), mask, Ambu bag, laryngeal mask airway, endotracheal tube (ETT) and/or even mechanical ventilator. However, in emergency of sudden apnea, hypoxia, or in source-limited circumstance, these lives-saving tools, technique and skilled providers may not appropriately and immediately available. Particularly in pediatric patients with wide variations of body weight and airway size. Soong's ventilation (SV) is a simple, novel, and noninvasive ventilation technique. It composes three main components of 1) continuous pharyngeal oxygen insufflation, with optional and intermittent maneuvers of 2) pinch nose-closure and/or 3) abdominal-compression. SV could generate operator controllable O_2-PPV which provide patient with effective oxygenation, ventilation, and partial circulation support without using any artificial mask or airways neither more complicated and invasive respiratory supporting strategies. There is no age (preterm neonates to adult) and body weight (500 gm to 110 kg) limitations.

Particularly, SV could achieve sufficient airway pressures to overcome airway resistance and expand lumen, even in cases of compromised airway or apneic status. SV maneuver creates O_2-PPV effect and accompany by chest wall excursion and improvement of O_2 saturation which enables simultaneous maintenance of cardiorespiratory stability. Its simplicity, effectiveness, and adaptability could make it a valuable adjunct and alternate in pediatric cardiopulmonary support, airway management and resuscitation settings. SV is highly operator-dependent skill and may have variations in PPV pressure level. Overall, SV could offer an effective respiratory and expiration support that promotes patient safety and clinical procedural success. During SV there should closely monitoring rather than a replacement for standard CPR modalities. However, dedicated experimental and clinical studies are needed to establish its safety, efficacy, and impact on survival before incorporation into CPR guidelines.

Synopsis

1 Nov, Sunday

Parallel Symposium 8: Critical Care Medicine

Nebulization Therapies in the Critically Ill Children

Dr. Manu Sundaram, Qatar

Nebulized drug therapy continues to occupy a central place in the management of the critically unwell child with respiratory distress, a large proportion of whom are, at the same time, being supported on high-flow nasal cannula (HFNC) therapy or non-invasive ventilation (NIV). Three broad categories of nebulizer device are in contemporary use – the jet, the ultrasonic, and the vibrating mesh nebulizer – and these differ considerably in their underlying mechanism, particle size characteristics, residual drug volume, and, most importantly, their suitability for use within a closed respiratory circuit. Of the three, the vibrating mesh nebulizer has emerged as the device of choice in the paediatric intensive care setting, on account of its consistent particle size, negligible residual volume, and the fact that it requires no added driving gas – a property that renders it uniquely suited to in-line use with HFNC and NIV without disturbing set flow, humidity, or delivered oxygen concentration. Correct placement of the nebulizer within the circuit – at the humidifier inlet in HFNC systems, and between the patient and the exhalation port in single-limb NIV circuits – has been shown, on both bench and clinical study, to influence aerosol deposition considerably, at times by several fold. For the child with critical, refractory bronchospasm, continuous nebulization, typically of salbutamol delivered via a dedicated tube set, offers a safe and effective alternative to intermittent dosing, with comparable efficacy, reduced preparation time, and lower overall drug cost. As critically ill children are increasingly managed on non-invasive respiratory support rather than invasive ventilation, a sound working knowledge of nebulizer mechanism, circuit-specific connection technique, and continuous nebulization practice remains indispensable to safe and effective aerosol drug delivery at the bedside.

Keywords
Nebulization; vibrating mesh nebulizer; high-flow nasal cannula; non-invasive ventilation; continuous nebulization; paediatric critical care

Synopsis

1 Nov, Sunday

Parallel Symposium 8: Critical Care Medicine

Flexible Bronchoscopy Treatment in Airway Hyper-secretion

Dr. An-Xia Jiao, Beijing, China

The condition of excessive mucus in the airways is a significant cause of wet cough, wheezing, respiratory failure and even death in children. Here, the main causes, mechanisms, clinical manifestations, and imaging manifestations of children's airway hypersecretion conditions will be mainly introduced. Flexible bronchoscopy plays a significant role in airway clearance during the state of high airway secretions, effectively improving ventilation, eliminating chronic infection foci, and improving prognosis. Timely identification of bronchoscopy indications and timely and effective clearance of secretions that are difficult to be coughed out from the airway are important measures to prevent the progressive aggravation of airway high secretion state.

Synopsis

1 Nov, Sunday

Parallel Symposium 8: Critical Care Medicine

Neuromuscular Respiratory Crises and Extubation Failure

Dr. Judith JM Wong, Singapore

Neuromuscular crises in critically ill children arise from acute or progressive weakness involving the inspiratory, expiratory, and bulbar muscles, leading to hypoventilation, ineffective cough, secretion retention, aspiration, and respiratory failure. Recognition can be challenging because hypercapnia and hypoxemia are late findings; early warning signs include inability to manage secretions, respiratory muscle fatigue, paradoxical breathing, altered mental status, and declining bedside pulmonary function measures such as vital capacity, maximal inspiratory pressure, and maximal expiratory pressure. Extubation failure may result from persistent respiratory muscle weakness, impaired airway clearance, bulbar dysfunction with aspiration risk, intensive care unit-acquired weakness, or critical illness-associated diaphragm dysfunction. Management requires timely escalation to invasive ventilation when gas exchange, consciousness, or airway protection is compromised, while carefully selected patients may benefit from noninvasive respiratory support, assisted cough techniques, meticulous secretion management, aspiration prevention, nutrition optimization, minimization of neuromuscular-blocking agents and corticosteroids when possible, early mobilization, and lung- and diaphragm-protective ventilation strategies. A structured approach to assessment, ventilator liberation, and post-extubation support is essential to reduce extubation failure and improve outcomes in children with neuromuscular respiratory vulnerability.

Synopsis

1 Nov, Sunday

Parallel Symposium 9: Infectious Diseases

Are Children with Chronic Respiratory Diseases at Risk of Japanese Encephalitis

Dr. Ellis KL Hon, Hong Kong SAR

(Lecture sponsored by Zuellig Pharma)

Background

Japanese encephalitis (JE) is a severe neurotropic flavivirus infection transmitted by Culex mosquitoes. While highly endemic in rural parts of Asia, JE is not prevalent in Hong Kong, averaging only zero to two local or imported cases annually. Consequently, routine immunization is not part of the local public health schedule but remains accessible for high-risk individuals or travelers. This paper explores clinical perspectives regarding pediatric cohorts with preexisting respiratory conditions – specifically asthma, prematurity, and chronic lung disease (CLD).

Objectives

To evaluate whether pediatric patients with underlying respiratory diseases face an increased risk of contracting JE or exhibit a worse prognosis upon infection, and to contextualize the utility of preventive immunizations.

Methods

A literature review was conducted analyzing the transmission dynamics, pathophysiology, and clinical outcomes of JE, with a focused examination on secondary complications in pediatric patients with underlying pulmonary compromise.

Results

JE virus transmission depends entirely on vector exposure and lacks direct human-to-human transmission. Consequently, preexisting asthma, prematurity, or CLD do not increase the baseline risk of contracting JE. However, if clinical neuroinvasive JE occurs, it carries a high baseline case-fatality rate of up to 30%, alongside permanent neurological sequelae in 30% to 50% of survivors. For children with preexisting respiratory fragility, neuroinvasive complications – such as bulbar paralysis, central respiratory depression, and status epilepticus – frequently precipitate severe acute respiratory failure. These patients require intensive mechanical ventilation and face a significantly worse prognosis and higher mortality due to their diminished pulmonary reserve.

Conclusion

Although underlying respiratory conditions do not elevate transmission risk, they drastically compounding the severity and prognosis of symptomatic JE. Given the catastrophic risks of neuroinvasive disease, targeted JE immunization should be strongly considered for this vulnerable pediatric cohort if traveling to endemic rural zones.

Synopsis

1 Nov, Sunday

Parallel Symposium 9: Infectious Diseases

Severe Adenovirus Respiratory Infections – The Possible Treatment

Professor Julian WT Tang, UK

Adenoviruses are non-enveloped, double-stranded DNA viruses that exist as multiple serotypes, which can cause a wide variety of localised as well as disseminated infections and disease presentations – in both the immunocompetent and immunocompromised host. I will present a few cases of adenovirus infections and discuss the management of this disease in children - and also mentioned briefly some related adult cases. There are no licensed antivirals or publicly available vaccines for adenovirus infections. Severe infections in the immunocompromised are often diagnosed late and therefore potentially fatal. Existing drugs, such as cidofovir and ribavirin have been used with variable success, and have significant adverse effects that require careful monitoring. Often, the first step is to reduce the level of immunosuppression where possible. There are no large-scale RCTs with these drugs for the treatment of severe adenovirus infections. Yet, such severe adenovirus infection cases remain a relative rarity, and there is a significant body of literature describing the management of individual cases that clinicians can usefully apply to their own patients.

Synopsis

1 Nov, Sunday

Parallel Symposium 9: Infectious Diseases

Update on Antivirals and Immunomodulatory Treatments for Respiratory Viral Infections

Professor Ivan FN Hung, Hong Kong SAR

This lecture updates antivirals and immunomodulatory strategies for hospitalized respiratory viral infections. Efficacy of repurposed and targeted antivirals will be discussed. The role of immunomodulators including corticosteroids, baricitinib, and tocilizumab for moderate to severe SARS-CoV-2 infections and the role of clarithromycin and NSAIDs in hospitalized influenza infection will be illustrated.

Synopsis

1 Nov, Sunday

Parallel Symposium 9: Infectious Diseases

OM-85: 35 Years of Evidence in Russia

Professor Leyla Namazova-Baranova, Russia

OM-85, a bacterial lysate of 21 respiratory pathogens, modulates innate and adaptive immunity by activating pattern recognition receptors, promoting Th1/Treg responses, enhancing phagocytosis, and increasing secretory IgA production. In Russia, OM-85 has been actively used and studied for three and a half decades; however, the vast majority of publications on this experience have been published in Russian-language journals and have therefore remained inaccessible to the international scientific community. The lecture will be devoted to summarizing three and a half decades of Russian clinical experience with OM-85 in children. Evidence from controlled trials, dissertations, and real-world studies shows that prophylactic use (10 days/month for 3 months) reduces acute respiratory infections (ARI) frequency by 2-3 fold, shortens illness duration, lowers antibiotic use and hospitalizations, and decreases exacerbations of recurrent bronchitis, asthma, and chronic ENT diseases. Therapeutic administration during ARI accelerates symptom resolution, reduces complications, and improves immune parameters (IFN-α, IgA, T cell subsets). OM-85 exhibits a favorable safety profile, with mild, transient adverse events comparable to placebo. OM-85 is included in Russian clinical guidelines for the treatment and prevention of ARI in children. In conclusion, OM-85 is an effective and safe immunomodulator for both prevention and treatment of respiratory infections in children, with robust evidence from Russian clinical practice.

Synopsis

1 Nov, Sunday

Parallel Symposium 10: Respirology

Non-CF Bronchiectasis in Asian Children

Professor Sushil Kabra, India

Bronchiectasis is a pathological term which denotes permanent dilated and thickened airways because of chronic inflammation, recurrent infection and progressive decline in lung functions due to multiple underlying illnesses.

The global burden of bronchiectasis is not very well documented. It is more common in poor and disadvantaged children from indigenous and low- and middle-income populations and more severe than high-income countries.

Common aetiologies from low as well as high income countries include post infectious specifically post pneumonia, measles, pertussis etc. Other causes include aspiration syndromes, malformations, primary ciliary dyskinesia, primary or secondary immune deficiency disorders. Causes could not be identified between 15-50% of children with bronchiectasis. Primary immune deficiency disorders and primary ciliary dyskinesia were more commonly reported from high income group countries as compared to low-income group as various investigations were difficult to get in resource poor setting. Overall post infectious causes are relatively common in Asia Pacific region.

Clinical features are nonspecific and consist of chronic respiratory symptoms. Depending on the severity/ extent of illness children may present with wet cough associated with exertional dyspnea and chest wall deformity. Some patients may have wheezing, hemoptysis and clubbing. Course of illness is variable and depend on underlying illness and treatment received. Children with generalized disease and getting recurrent exacerbations may have progressive decline in pulmonary function test and respiratory failure.

With compatible clinical phenotype, the first imaging should be X ray film of chest. Findings may be nonspecific varying from completely normal to increased bronchovascular marking and peribronchial thickening. It is believed that it is unlikely to be completely normal in children with bronchiectasis. With clinical phenotype and clues from radiography of chest high resolution CT scan (HRCT) may be performed to confirm a diagnosis of bronchiectasis. HRCT is the gold standard for diagnosis of bronchiectasis. Findings on HRCT include: bronchial dilatation (broncho-arterial ratio > 0.8), bronchial wall thickening, lack of normal bronchial tapering, any bronchi with an internal diameter greater than the diameter of the accompanying pulmonary artery (signet ring sign) and bronchi visible closer than two centimeters to the pleural surface.

The outline of treatment of bronchiectasis includes antibiotic administration, airway clearance, mucolytic agents, inhaled corticosteroids and bronchodilators and surgical intervention.

Early identification of exacerbation in stable patient is a challenge and clues for same may be changes in cough frequency or character, and worsening chest signs. Early administration of antibiotics improves the outcome.

Long-term (>3-months) antibiotics are recommended for those experiencing frequent (>3) exacerbations per year. Three broad approaches are available: (a) macrolides and (b) other oral antibiotics; and (c) inhaled antibiotics. Efficacy of either approach is unclear. Long term macrolides are being evaluate for efficacy.

Majority of children respond to medical treatment. A small proportion may need surgical interventions like lobectomy. Indications may include localized disease with poor response to medical treatment and occasionally uncontrolled haemoptysis. Complications include poor growth, pulmonary hemorrhage, chronic hypoxemia, and pulmonary hypertension.

As non-CF bronchiectasis is result of multiple underlying cause and no cure in majority, treatment consist of supportive care and monitoring should focus on quality of life (QoL). Tools to assess QoL in these children are limited and evolving. As of now long-term oral azithromycin and yoga have demonstrated some improvement in QOL scores, more studies are required to accurately determine important factors contributing to QOL

Synopsis

1 Nov, Sunday

Parallel Symposium 10: Respirology

Dysfunctional Swallowing and Respiratory Disease

Professor Gerald Loughlin, USA

The overlap of the pathways for air to enter the lungs and food to enter the GI tract, places the lungs at risk for aspiration of liquids and food. The risk is preset both during the ingestion of food as well as following reflux or vomiting. An effective and coordinated swallow is an essential first line of defense of the airway. (see figure below)

1. Premature infants
   Swallowing is not functional before 32 weeks gestation and matures from 33 weeks as long as the clinical course is uncomplicated.
2. Congenital abnormalities of the aerodigestive system (TEF, LTE Cleft)
3. Central nervous system dysfunction-cricopharyngeal dysfunction, achalasia, dysautonomia (Riley-Day syndrome), esophageal dysmotility – atony, s/p fistula or atresia repair, brainstem compression – tumor, Chiari malformation.
4. Central nervous system injury – infection, trauma, stroke, anoxia
5. Neuromuscular disease – myotonic dystrophy, myasthenia, Guillain-Barre, polio, muscular dystrophy, spinal muscular atrophy
6. Upper airway trauma – major surgery – laryngeal, transplant surgery (cardiac or lung), prolonged intubation
7. Vascular compression of the esophagus – e.g. aberrant right subclavian, double arch, right arch with ligamentum
8. Acute respiratory illness associated with tachypnea and increased work of breathing (Bronchiolitis)

<u>Diagnosis</u>

- History and Physical
- Observe Feeding – involve OT/PT
- Modified barium swallow study
- Endoscopy – Upper way. GI. Lung

Synopsis

1 Nov, Sunday

Parallel Symposium 10: Respirology

Treatment of Postinfectious Bronchiolitis Obliterans (PiBO)

Professor Anna Nathan, Malaysia

There is not a clearly defined nor accepted treatment protocol for PiBO. This perhaps is due to the unequal distribution of occurrence of PIBO, happening mainly in South America, China and Asia, suggesting a possible genetic predisposition.

As the pathophysiology of post-infectious bronchiolitis obliterans is an overly brisk inflammatory response that fails to stop, majority of the treatment is aimed at controlling inflammation (particularly neutrophilic) and proinflammatory cytokines e.g. IL-1ß, IL-6, and IL-8. Others have found aberrant miRNA expression profile in PiBO, which impacts pathways responsible for the regulation of inflammation and fibrosis.

As high as 56% of patients with PIBO have concomitant bronchiectasis changes in their CT.

Many treatments have been investigated, though most of the studies are retrospective and/or with small number of patients:

- Early use (within 3 weeks to 3 months of illness) of pulse IV Methylprednisolone at doses 10-30 mg/kg/day x 3 days. This should be repeated monthly for 3-6 months. The key is, however, to administer steroids early, before the fibrosis sets in. However, there are no RCT to know of how many cycles of corticosteroid should be given and for how long. Studies have shown that administering steroids when there is bronchial wall thinning is beneficial.
- Oral prednisolone 1.5mg/kg/day x 1 month and slowly taper off by 6 months + Azithromycin (5-10mg/kg/dose, EOD) has also been used. However, one must monitor the side-effects of prolonged oral corticosteroid use.
- Continuous nebulised corticosteroids (Budesonide 500mcgs bd) for 6-12 months may improve lung function indices compared to intermittent use of nebulised budesonide.
- BAMA therapy i.e. Budesonide+ Azithromycin + Montelukast + Acetylcysteine) for 3 months improved HRCT and lung function decline. As Azithromycin has been recognised to have anti-neutrophilic activity and anti-IL 6,8 and TNF, it has also been used: dose 5 mg/kg/EOD. However, once again the evidence is lacking.
- Fluticasone, Azithromycin + Montelukast or FAM therapy: this has been extrapolated from treatment of Bronchiolitis Obliterans Syndrome (post-transplant) although there is little evidence to support its use in PiBO. There are studies use Inhaled Budesonide at 1 mg bd instead of Fluticasone, to the FAM therapy with improvements in lung function and growth. Can consider replacing Fluticasone with Seretide.
- Long-acting anti-muscarinic agents (LAMA) e.g. Tiotropium which was used in a DBRCT found it to be useful in acute treatment of PIBO during an exacerbation, in patients with reversibility.

Supportive care cannot be underestimated: includes administering home oxygen or NIV as needed, chest physiotherapy, antibiotics in cases of acute respiratory infections, diuretics in some patients, immunization against pneumococcus and influenza, adequate nutrition, and avoidance of tobacco smoke or other inhaled drugs. Pulmonary rehabilitation may preserve lung function and quality of life, although evidence remains scarce.

Research into the role of microRNAs(miRNAs) is promising and upcoming, demonstrating its role in dysregulated inflammation, and this may lead to more effective therapeutic options.

In end-stage disease with severely impaired lung function and poor quality of life, lung transplantation may be considered, although it remains a last resort due to its complexity and associated risks.

Synopsis

1 Nov, Sunday

Parallel Symposium 11: Tuberculosis

Difficulties and Challenges in the Diagnosis and Treatment of Paediatric Tuberculosis

Professor A-Dong Shen, Beijing, China

Childhood tuberculosis (TB) is a critical overlooked global public health issue. According to the WHO Global Tuberculosis Report 2025, 1.2 million new childhood TB cases and 150,000 child TB deaths occurred globally in 2024, making up 12% of all incident TB and 16% of total TB mortality. In contrast, China's notified childhood TB proportion is only 1% – 2%, substantially lower than the global level. Multiple international frameworks aim to strengthen childhood TB control, targeting zero child TB deaths and the elimination of pediatric TB.

Diagnosis and treatment are major bottlenecks for pediatric TB care. Etiological confirmation is hard in children due to poor sputum production, low mycobacterial loads in substitute gastric and stool specimens, and limited sensitivity of conventional tests (acid-fast staining ~10%, mycobacterial culture 20% – 30%, nucleic acid assays 50% – 60%). Pediatric TB manifests atypically with a high burden of extrapulmonary TB (EPTB). Among our 1,212 pediatric TB patients, isolated pulmonary TB (PTB) accounted for 46%, isolated EPTB 37%, and concurrent PTB-EPTB 17%, with tuberculous meningitis (TBM) representing 56% of all EPTB. Nonspecific imaging, delayed care-seeking (over half waiting >30 days), and absent cough in 53.4% of children contribute to frequent misdiagnosis. Only 40% of TBM patients show typical initial CSF findings, and most are diagnosed at moderate-to-late stages. Xpert MTB/RIF Ultra using gastric and stool samples greatly elevates pathogen detection sensitivity.

Therapeutic evidence for children remains inadequate, as most anti-TB clinical trials exclude minors under 18. Two pivotal Phase III trials confirmed that 4-month shortened regimens achieve non-inferior efficacy and equivalent safety versus standard 6-month treatment for children with non-severe drug-susceptible TB, yet evidence for severe TB and TBM is scarce. Two representative misdiagnosis cases demonstrate common clinical traps: tracheobronchial TB mimics pulmonary masses, while immunocompromised children may present false-negative IGRA and PPD results, delaying definitive diagnosis.

To resolve these clinical barriers, we propose integrated strategies: standardized TB training for general pediatricians to enhance differential diagnosis awareness; strengthened multidisciplinary cooperation with laboratory, radiology, ICU and pathology teams; a tiered talent cultivation system including overseas training, postgraduate supervision and standardized continuing education; and specialized research platforms for respiratory pathogens. Multifaceted improvements in diagnosis, treatment and workforce development will reduce misdiagnoses, cut childhood TB mortality, and facilitate progress toward the global goal of ending TB in children and adolescents.

Synopsis

1 Nov, Sunday

Parallel Symposium 11: Tuberculosis

Sequelae of Pulmonary Tuberculosis in Children

Dr. Citra Cesilia, Indonesia

Tuberculosis (TB) programs measure success at the moment treatment ends, yet for many survivors that is where a second, chronic illness begins[1,2]. In children, post-TB sequelae account for about half of the 21 million disability-adjusted life-years attributed to TB[3-5], and even among adults who complete treatment successfully, mortality remains almost four times that of the general population[6]. For children with severe pulmonary TB (PTB) or ongoing symptoms, WHO advises an end-of-treatment symptom screen, clinical examination and nutritional assessment, chest imaging after extensive disease, CT when chronic or recurrent symptoms persist, and pre- and post-bronchodilator spirometry in children aged about 4 years or older who had severe PTB[7].

Recent studies challenge that assumption. The field now has a sharper definition of post-tuberculosis lung disease (PTLD) that requires abnormalities in at least two of three domains (lung function, symptoms, imaging)[8]. Across current studies, children who survived PTB showed impaired lung function, persistent symptoms, structural abnormalities, and poorer respiratory quality of life than their household peers[9-13]. These findings are consistent with reports that child survivors describe breathlessness, stigma, missed schooling, and household financial strain for years after cure[2,13]. These findings are due to the lung still growing. Atelectasis from nodal compression, bronchiectasis, fibrosis, and tracheobronchial stenosis, reported in 40–50% of children with PTB, may lower the peak lung function a child ever reaches[1,4]. Younger age, severe symptoms, extensive radiographic findings, and undernutrition all add to the risk[4,10,11], suggesting that settings with delayed diagnosis and high rates of undernutrition may carry a substantial but underrecognized long-term burden.

Guidance has not kept pace with this evidence. Of 40 national TB guidelines from high-burden countries, only four mentioned PTLD, and none offered pediatric-specific evaluation or management, which were rarely addressed[14]. Pediatric studies still use inconsistent definitions and adult symptom tools, children under five remain understudied[12], and PTLD lacks a primary ICD code[3]. An individual participant data meta-analysis is now developing risk-prediction tools across the life course[15]. Recent reviews propose that every child with severe or drug-resistant TB (DR-TB) or persistent symptoms be assessed at treatment completion and at least once in the following year, using symptom review, age-appropriate lung function testing, chest imaging and growth assessment, with clear referral to physiotherapy, airway clearance, bronchoscopy or surgical care where needed, and pragmatic rehabilitation with nutritional support[4,12]. Programs should record PTLD indicators so that follow-up becomes part of routine care[12,13]. Treatment completion should mark the start, not the end, of lung-health care for children. WHO Module 5 opens the door to targeted follow-up, the latest evidence suggests that door should open wider, and the Asia-Pacific region urgently needs its own pediatric post-TB data.

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Synopsis

1 Nov, Sunday

Parallel Symposium 11: Tuberculosis

Classification and Treatment Strategies of Paediatric Tracheobronchial Tuberculosis

Dr. An-Xia Jiao, Beijing, China

Childhood tracheobronchial tuberculosis is an important type of pulmonary tuberculosis in children, and it often originates from primary pulmonary tuberculosis. Therefore, the main types of tracheobronchial tuberculosis in children are different from those in adults. Lymph node fistula type is the main type of pediatric tracheobronchial tuberculosis. Here, the main points to be introduced include the classification, clinical and imaging characteristics of childhood tracheobronchial tuberculosis, as well as the treatment strategies via bronchoscopy. And combined with case studies, this paper discusses the interventional treatment methods and therapeutic effects for pediatric tracheobronchial tuberculosis.

Synopsis

1 Nov, Sunday

Parallel Symposium 12: Common Sleep Medicine

Transforming Sleep Care: Digital Approaches to Support Families of Children with Neurodiversity

Professor Shirley X Li, Hong Kong SAR

Sleep disturbances are highly prevalent among children with neurodiversity, including autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD). Parent-based behavioural sleep interventions have demonstrated promising outcomes in improving sleep within this population. However, access to these interventions is often hindered by system-level (e.g., shortage of trained therapists, long waiting time) and patient-level barriers (e.g., difficulties with travel, competing commitments). This presentation will explore recent research on digital modalities for delivering parent-based sleep interventions for children with neurodiversity, highlighting their potential to overcome existing barriers and enhance accessibility. Attendees will gain insights into innovative digital strategies that support families in managing sleep difficulties in children with neurodiversity.

Synopsis

1 Nov, Sunday

Parallel Symposium 12: Common Sleep Medicine

Technological Ways of Dealing with Insomnia in Adolescents

Dr. Rachel NY Chan, Hong Kong SAR

Insomnia is a common sleep problem among adolescents, and cognitive behavioural therapy for insomnia (CBT-I) is recommended as a first-line treatment. However, access to CBT-I remains limited by resource constraints and a shortage of trained therapists. Digital technologies offer an opportunity to extend evidence-based insomnia care beyond traditional face-to-face delivery. This presentation will review self help and smartphone-based CBT-I and their role in the management of adolescent insomnia, focusing on the current evidence, their potential to improve treatment accessibility, and challenges related to engagement and adherence. It will also consider how digital interventions can be adapted to adolescents' developmental needs and how emerging approaches, including artificial intelligence chatbots, may support treatment engagement and delivery. Evidence specific to adolescents will be distinguished from findings in adults and young adults. Clinical implications, implementation considerations, and priorities for future research will be discussed.

Synopsis

1 Nov, Sunday

Parallel Symposium 12: Common Sleep Medicine

Paediatric Insomnia: What to Exclude, What to Teach, When to Prescribe

Dr. Majid Al Teneiji, UAE

Insomnia affects up to a quarter of children and is more common in those with neurodevelopmental disorders, chronic respiratory disease and complex medical needs. Many are referred with a request for medication, yet a large proportion have a treatable mimic or would respond well to behavioural measures alone. This talk offers a practical, three-step clinical pathway for clinicians across paediatrics, pulmonology and sleep medicine.

Exclude

Recognising conditions that present as insomnia, including obstructive sleep apnoea, delayed sleep-wake phase disorder, restless legs syndrome and iron deficiency, medication effects (including common respiratory drugs), and ventilation-related sleep disruption. A clinic-ready diagnostic algorithm and red flags will be presented.

Teach

Evidence-based behavioural strategies matched to age and neurotype, from graduated extinction and bedtime fading in young children to stimulus control and CBT-I components in adolescents, with attention to family and cultural context.

Prescribe

When pharmacotherapy is reasonable, with a focus on melatonin as a chronobiotic versus hypnotic, the importance of timing and formulation, product quality concerns, and the limited evidence for other off-label agents. Principles of review and deprescribing will be emphasised.

The session draws on the 2025 IPSA consensus and current guidance, and clearly separates strong evidence from expert consensus and common practice.

Learning Objectives

By the end, participants will be able to (1) identify key insomnia mimics, (2) select age- and neurotype-appropriate behavioural interventions, and (3) apply a structured approach to prescribing and reviewing melatonin.

Synopsis

1 Nov, Sunday

Keynote Lecture 6

Interventional Flexible Bronchoscopy in Children: State of the Art
Professor Ashkan Moslehi, Kuwait

Interventional flexible bronchoscopy in children has evolved considerably in recent years, driven by advances in bronchoscopic technology, imaging, and therapeutic techniques. The introduction of newer-generation flexible bronchoscopes, particularly single-use bronchoscopes, has expanded the possibilities for performing advanced airway procedures in children while addressing important considerations related to equipment availability, infection control, and procedural safety.

The appropriate use of interventional flexible bronchoscopy requires careful patient selection, a clear understanding of indications and contraindications, and consideration of the available technology and expertise. Recent developments have broadened the role of flexible bronchoscopy beyond conventional diagnostic applications and provided new opportunities for the management of complex paediatric airway and respiratory conditions.

A contemporary understanding of these advances is essential for integrating interventional flexible bronchoscopy into modern paediatric respiratory practice and maximizing its safety, effectiveness, and clinical utility.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 1

#4

OSA in Children: Diagnostic, Treatment Outcomes, and PAP Therapy Barriers in Oman

Assoc. Prof. Hussein Al Kindi[1], *Dr. Majid Al Jabri*[1], *Dr. Tabinda Naz Qureshi*[1], *Prof. Mohammed Al Abri*[1], *Dr. Nawal Al Shamli*[1], *Dr. Deepali Jaju*[1]

[1]*Sultan Qaboos University, Muscat, Oman*

Background

In children, obstructive sleep apnea (OSA) negatively impacts cognitive, behavioral, and physical health. This study aimed analyze pediatric polysomnography data and the severity of OSA at SQUH. It also evaluated treatment strategies, with a focus on the acceptance, adherence, and barriers to positive airway pressure (PAP) therapy.

Methods

A retrospective chart review was conducted from January 2015 to December 2019. Data from 290 pediatric patients (aged 0–18 years) were analyzed. Variables assessed included demographics, OSA severity, treatment modalities, and PAP therapy adherence outcomes.

Results

Of the 290 pediatric patients included (189 males [65.2%]), OSA was diagnosed in 249 (85.9%), with severe OSA in 167 (67%). Multivariable logistic regression identified obesity (OR 3.08, 95% CI 1.61–5.86, p=0.0006) and Down syndrome (OR 3.19, 95% CI 1.29–7.92, p=0.012) as independent predictors of severe OSA, while younger age was associated with increased severity (OR 0.87 per year, 95% CI 0.80–0.94, p=0.0007).

PAP therapy was recommended for 100 patients, initiated in 82, and accepted by 55 (67%). Among those, 38 (69%) achieved adherence. Major barriers included device intolerance, child refusal, and caregiver-related challenges.

Conclusion

Severe OSA was highly prevalent among pediatric patients undergoing sleep studies, indicating a substantial disease burden. Despite clear recommendations, PAP adherence remained suboptimal, with device intolerance and caregiver-related factors as key barriers. Obesity and Down syndrome were significant contributors to disease severity. Tailored, multidisciplinary interventions are essential to improve PAP adherence and optimize pediatric OSA management.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 1

#15

Extracorporeal Life Support for Severe Paediatric Acute Respiratory Distress Syndrome: A Single-Centre Case Series

Dr. Matthew Lam[1], *Dr Karen Ka Yan Leung*[1]

[1]*Hong Kong Children's Hospital, Hong Kong SAR*

Background

Paediatric Acute Respiratory Distress Syndrome (PARDS) is a heterogenous clinical syndrome with significant mortality in paediatric intensive care units (PICUs) globally. The Second Paediatric Acute Lung Injury Consensus Conference guidelines do not recommend the routine use of Extracorporeal Membrane Oxygenation (ECMO) for severe PARDS due to a lack of definitive survival benefits.

Methods

Children admitted to the PICU at Hong Kong Children's Hospital from January 2024 to December 2025 were reviewed retrospectively.

Results

Nine children with PARDS required ECMO during the study period [Table 1]. Comorbidities were present in 55.6% of the cohort, including malignancy and epilepsy (n=5). Streptococcus pneumoniae was the most common infectious organism (n =5). Most patients (n =8) had severe hypoxaemia prior to ECMO cannulation, with the mean oxygenation index (OI) at ECMO initiation being approximately 41. Over half of the patients who required ECMO were aged 6 years or below (n =5). Veno-venous ECMO (VV-ECMO) was used in 8 out of 9 cases. A significant portion of patients required prolonged PICU stays of 4 weeks or more (n =7). Survival to PICU discharge was 66.7% (n =6), which is comparable to the latest Extracorporeal Life Support Organisation (ELSO) live registry of 56-63%.

Conclusion

In this single-centre cohort of children with severe PARDS requiring ECMO, comorbidities and pneumococcal disease were prevalent. Despite marked hypoxaemia at ECMO initiation, the survival rate to PICU discharge was comparable to international ELSO registry benchmarks. More studies are required to evaluate the efficacy of ECMO in managing PARDS.

Case no.	Diagnoses besides PARDS	Infection	Age (years)	OI when ECMO initiated	Type of ECMO	ECMO days	Days in PICU	Survival to PICU	Survival to hospital discharge
1	- Necrotising pneumonia - Good past health	- S. pneumoniae	6	Started in Japan	VV	28	138	Yes	Yes
2	- Pneumonia - Septic shock - Good past health	- S. pneumoniae - Influenza A virus	14	39	Peripheral VA → VV	17	35	Yes	Yes
3	- Pneumonia - septic shock - Background of SCN1A related epilepsy (normal development)	- negative culture	8	51	VV	9	16	Yes	Yes
4	- Pneumonia - Shwachman Diamond Syndrome	- S. pneumoniae - Parainfluenza 2 - Klebsiella pneumonia	15	> 50	Peripheral VA→ Peripheral V-AV → VV	14	14	No	No
5	- Necrotising Pneumonia - Good past health	- S. Pneumoniae - RSV - EV/ RV	6	28	VV	27	81	Yes	Yes
6	- Pneumonia - Good past health	- Influenza B virus - Group A Streptococcus	12	31	Peripheral VA→ VV	10	60	Yes	Yes
7	- HLH - pulmonary haemorrhage - ECPR	- Adenovirus	3	>50	Peripheral VA	6	95	Yes	Yes
8	- invasive pneumococcal pneumonia - streptococcal bacteremia - Ex prem 33+1	- S. pneumoniae - EV/RV	5	36	VV	95	95	No	No
9	- Pneumonia - Stage 4 Retroperitoneal neuroblastoma	- Adenovirus	4	43	VV	57	69	No	No
Summary statistics	55.6% has significant past medical history / comorbidities	S. pneumoniae in 55.6% of cases	≤ 6yo In 55.6% of cases	Mean =41 (OI >30 = 77.8%)	-	Mean = 29.2 (9-95)	Mean = 67 (14 -138)	Survival to PICU discharge = 66.7%	Survival to Hospital discharge = 66.7%

Table 1: summary of patients with PARDS treated with ECMO at Hong Kong Children's Hospital 2024 – 2025. Abbreviations: ECPR = extracorporeal cardiopulmonary resuscitation; EV/RV = enterovirus/ rhinovirus; HLH = hemophagocytic lymphohistiocytosis; OI = oxygenation index; PARDS = Paediatric Acute Respiratory Distress Syndrome; S. pneumoniae = streptococcus pneumoniae; RSV= respiratory syncytial virus; VA = veno-arterial ECMO; V-AV = veno-arterio-venous ECMO; VV = veno-venous ECMO.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 1

#61

Factors Associated with Failure of Pigtail Chest Drainage in Paediatric Parapneumonic Effusion: A 10-Year Retrospective Study from Thailand

Dr. Sarinrath Charoonrochana[1], *Associate Professor Harutai Kamalaporn*[1]

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Background

Parapneumonic effusion and empyema are important complications of pediatric pneumonia. Pigtail-catheter drainage is increasingly used, but Thai data on its effectiveness and predictors of failure remain limited.

Objectives

To determine the failure rate of pigtail drainage in Thai children with parapneumonic effusion and identify clinical or biochemical factors associated with failure.

Methods

This single-center retrospective study reviewed patients aged 6 months–18 years who underwent pigtail insertion for parapneumonic pleural effusion at Ramathibodi Hospital from 1 January 2014 to 31 July 2024. Failure was defined as the need for additional drainage or surgical intervention within 72 hours after removal of the first catheter. Multivariate logistic regression identified independent predictors and generated a risk score.

Results

Of 80 children requiring intercostal drainage, 63 received pigtail catheters and 20/63 (31.7%) experienced failure. Mean age was 6.9 ± 4.3 years; 62% were male; 48% had loculation on ultrasound; and 40% received intrapleural fibrinolysis. Half of failures subsequently required surgery. Independent predictors were age >5 years, loculated effusion, pleural LDH >1,000 IU/L, and necrotizing pneumonia on chest CT. A composite score [2.5(age>5 years) + 2(loculation) + 1(LDH>1,000) + 1(necrotizing pneumonia)] showed good discrimination (AUC 0.87; 95% CI 0.77–0.96). A cutoff ≥3.5 achieved 75% sensitivity and 83.7% specificity.

Conclusions

Pigtail-catheter drainage had a 31.7% failure rate. The proposed risk score may help identify high-risk patients who could benefit from earlier alternative drainage strategies or surgical referral.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 1

#125

Clinical Profile of Children with Post-infectious Bronchiolitis Obliterans in Eastern India

Dr. Saurabh Agarwal[1], *Dr. Nisha Sahoo*[1], *Dr Shivakumar M Biradar*[1], *Dr. Ketan Kumar*[1], *Dr. Krishna Mohan Gulla*[1], *Dr. Rashmi Ranjan Das*[1]

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Objective

To describe the clinical profile, treatment, and outcomes of children with post-infectious bronchiolitis obliterans (PIBO).

Methods

We conducted a retrospective review of children under 14 years of age diagnosed with PIBO between March 2022 and July 2026.

Results

A total of 35 cases were diagnosed, of which 21 (60.3%) were males. The median (IQR) age at diagnosis was 12 (7.0–17.5) months. The median (IQR) duration of symptoms at presentation was 3.0 (2.0–5.25) months. The most common presenting features of the initial illness were fever, cough, and fast breathing. Ten (41.7%) children required mechanical ventilation. At presentation, there was wheeze in 75.0%, crepitations in 70.8%, and chest hyperinflation in 29.2%. Chest CT showed mosaic attenuation in 21 (87.5%) patients. Viral pathogens were identified in the majority, with adenovirus in 21 (60%), influenza virus and SARS-CoV-2 in 2 8.3% patients each, and bacterial pathogens in 16.7%. Thirty-one (85%) patients received monthly intravenous methylprednisolone (IVMP) pulse therapy. Oral steroids were used in 11 (31%) children. Adjunctive therapies included hydroxychloroquine (100%), azithromycin (95.8%), montelukast (95.8%), inhaled tiotropium (87.5%), and inhaled corticosteroids (100%). Three children (8%) died due to acute respiratory exacerbation.

Conclusion

PIBO should be considered in young children presenting with persistent respiratory symptoms following a severe lower respiratory tract infection, especially of viral etiology. The diagnosis is often delayed. Most children require long-term corticosteroid-based regimens, often in combination with immunomodulatory and inhaled therapies. Effective and safer alternatives to current treatment protocols are urgently needed.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 1

#116

Age-Specific Clinical Characteristics of Xpert MTB/RIF-Confirmed Pulmonary Tuberculosis in Children

Dr. Rini Savitri Daulay[1], Dr. Ulfatul Ulya[1], Dr. Fajriya Wahyuni[2], Dr. Wisman Dalimunthe[3]

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Background

Pulmonary tuberculosis (TB) in children presents with nonspecific manifestations. However, clinical features associated with microbiological confirmation may differ across age groups. This study evaluated age-specific clinical characteristics of microbiologically confirmed pulmonary TB in children.

Methods

This study included children with pulmonary TB at Adam Malik Hospital, Medan, Indonesia, from January 2022 to January 2024. Microbiological confirmation was defined as a positive Xpert MTB/RIF result. Clinical characteristics were compared between Xpert-positive and Xpert-negative groups using chi-square or Fisher's exact tests. Manifestations among Xpert-positive children were evaluated across age groups. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated.

Results

Of 84 children, 54 (64.3%) were Xpert-positive and 30 (35.7%) Xpert-negative. Among Xpert-positive children, 61% were aged ≥10 years. Cough was the predominant manifestation across age groups, occurring in 92% of children aged <5 years and 97% of those aged ≥10 years; cough and weight loss were equally frequent (88%) among those aged 5–<10 years. Night sweats differed significantly by age, occurring in 0%, 50%, and 39% of children aged <5, 5–<10, and ≥10 years, respectively (p=0.008). Compared with Xpert-negative children, malaise was less frequent among Xpert-positive children (69% vs 90%, p=0.027) and was inversely associated with microbiological confirmation (OR 0.17, 95% CI 0.03–0.70). No other clinical characteristic differed significantly.

Conclusion

Clinical manifestations of Xpert-confirmed pulmonary TB vary by age, particularly night sweats, while cough remains predominant. Because individual symptoms have limited discriminatory value, microbiological confirmation remains important for diagnosis.

Keywords

Children; pulmonary tuberculosis; microbiological confirmation; Xpert MTB/RIF; clinical characteristics

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 2

#7

Predictive Factors for the Development of Obstructive Bronchiolitis in Children with Adenovirus Pneumonia

Dr. Hoang-Dung Nguyen[1,2], Dr. Thanh-Thuc Tran[1,2], Assoc. Prof. Nguyen Phung[1,2]

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Background

Post-infectious bronchiolitis obliterans (PIBO) is a chronic, irreversible small-airway disease that may follow adenoviral pneumonia in children, leading to persistent morbidity. In Vietnam and other low- and middle-income countries, early clinical predictors of PIBO remain poorly defined.

Methods

We conducted a six-year retrospective cohort study at a tertiary children's hospital in southern Vietnam from 2018 to 2024 including children with PCR-confirmed adenoviral pneumonia. Patients who survived the index hospitalization were followed for up to six months and classified as PIBO or non-PIBO.

Results

Among 140 eligible children, 116 survivors were analyzed (median age 10.5 months; male: female 1.1:1). Within six months of discharge, 32/116 children developed PIBO. Compared with non-PIBO patients, the PIBO group had longer fever duration (12 vs 9 days) and hospital stay (47.5 vs 34.5 days), and more often received invasive mechanical ventilation (43.8% vs 20.2%) and glucocorticoids (68.8% vs 27.4%). In multivariable analysis, interstitial infiltrates (OR 12.80, 95%CI 3.34–49.01), fever duration (per day; OR 1.28, 95%CI 1.11–1.47), history of respiratory support (OR 9.12, 95% CI 2.22–37.43), and male sex (OR 7.47, 95% CI 1.54–36.33) were independently associated with PIBO, whereas underlying disease was associated with lower odds of PIBO (OR 0.05, 95%CI 0.01–0.22). The model showed good discrimination (AUC 0.921).

Conclusion

Simple bedside variables such as sex, fever duration, a history of pre-admission respiratory support, and interstitial changes on chest radiography identify children at highest risk of PIBO after adenoviral pneumonia and may inform risk-stratified follow-up in resource-limited settings.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 2

#17

Respiratory Function in Ambulant Boys with Duchenne Muscular Dystrophy Undergoing Micro-dystrophin Gene Therapy: A Single-Centre Observational Study from the UAE

Dr. Yasmin Mahfouz[1], Helen Cranney[1], Dr. Omendra Narayan[2], Dr. Vivek Mundada[3], Dr. Arif Khan[4]
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Background
Respiratory failure remains a major cause of morbidity and mortality in Duchenne muscular dystrophy (DMD), yet the respiratory phenotype of boys undertaking micro-dystrophin gene therapy has not been well described.

Methods
We performed a single-centre, observational study of boys with DMD assessed in a tertiary paediatric respiratory service through a regional gene therapy referral pathway, prior to receiving gene therapy. Spirometry was performed in all, and maximal inspiratory and expiratory pressures (MIP and MEP) recorded where achieveable. Overnight polysomnography was performed selectively on clinical grounds.

Results
24 boys were included. All were ambulant. The median forced vital capacity (FVC) was 101.6% predicted [IQR 92.5–104.2], and 20/24 (83.3%) had an FVC ≥80% predicted. MIP/MEP were obtained in 18 boys, and 16/18 had a preserved FVC; despite this, MIP was frequently reduced: MIP <60 cmH_2O in 14/18 boys, including 12/16 with preserved FVC. Polysomnography was performed in 18 boys; 14/18 had a preserved FVC, but 17/18 (94.4%) had an abnormal PSG. AHI was mostly in the mild range (12/18 66.7%), and apnoeas were commonly central in origin (9/18 50%). AHI correlated inversely with motor function (NSAA before therapy rho = -0.51 p=0.036).

Conclusions
In boys with DMD assessed shortly prior to gene therapy, preserved spirometry frequently coexisted with reduced respiratory muscle strength pressures, and sleep-disordered breathing within the PSG subgroup. Spirometry alone underestimates respiratory involvement in this group. Respiratory muscle strength pressures and polysomnography merit a clearer role in surveillance, and respiratory endpoints should be incorporated into gene therapy care pathways.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 2

#108

Diagnostic Utility of Impulse Oscillometry for Mannitol-Induced Airway Hyperresponsiveness in Children

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Background

The mannitol challenge test using spirometry assesses asthma-linked airway hyperresponsiveness (AHR) but is effort-dependent, making it difficult for young children. Impulse oscillometry (IOS) offers a non-invasive, effort-independent alternative. We evaluated IOS's diagnostic value for detecting mannitol-induced AHR in children.

Methods

This retrospective single-center study (2015–2024, Kwong Wah Hospital, Hong Kong) included 52 controller-naive children undergoing mannitol challenge and IOS. Patients were classified by standard PD15 criteria (≥15% FEV_1 fall at <635 mg mannitol) into Normal (n=21) and AHR-positive (n=31) groups. Post-mannitol IOS changes were analyzed.

Results

Baseline demographics were comparable including age, sex, growth parameters. The mean age of the AHR-positive group was 10.2 years old (IQR 8.8-13.2) and the AHR-negative group was 11.1 years old (IQR 8.9-14.5). Post-challenge, the AHR-positive cohort showed significantly greater percentage increases in total airway resistance (R5%) (35.1% vs 9.1%), peripheral resistance (Rperipheral%) (55.6% vs 9.4%), Area of Reactance (AX%) (70.0% vs 10.3%), and resonant frequency (F%) (106.9% vs 15.1%) (all $p < 0.001$). R5 % change significantly differentiated AHR severity groups. FEV_1 % changes inversely correlated with changes in R5%, AX%, and F%. ROC analysis revealed strong AHR prediction for R5 % change (AUC=0.813, optimal cut-off ≥23.1%; 74% sensitivity, 90% specificity), Rperipheral % change (AUC=0.817, cut-off ≥35.7%; 71% sensitivity, 91% specificity), and F % change (AUC=0.83, cut-off ≥62.9%; 73% sensitivity, 91% specificity).

Conclusion

IOS provides a highly sensitive, specific, and effort-independent modality for diagnosing airway hyperresponsiveness in children.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 2

#146

Longitudinal Pulmonary Function Outcomes in Patients with Primary Ciliary Dyskinesia: A Real-Life Experience

Prof. Bulent Karadag, Dr. Fulya Özdemircioğlu, Dr. Seyda Karabulent[1], Dr. Merve Selcuk Balci[1], Dr. Ceren Ayca Yildiz[1], Dr. Neval Metin Cakar[1], Dr. Eda Ersa Baysal[1], Dr. Bursa Ozgunay[1], Dr. Muge Merve Akkitap Yigit[1], Dr. Emre Vgurlu[1]

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Background/Purpose

Primary ciliary dyskinesia (PCD) is a rare genetic disorder characterised by progressive airway disease, yet longitudinal pulmonary function data remain limited. We evaluated lung function trajectories over five consecutive annual assessments and identified characteristics associated with lung function decline.

Methods

In this single-centre retrospective study, 143 people with PCD were evaluated; 79 (55.2%) with ≥5 years of annual spirometry constituted the longitudinal cohort. Percent predicted FEV_1 ($ppFEV_1$) was analysed across five annual time points (T1–T5) using linear mixed-effects models and Wilcoxon signed-rank tests. Patients with a ≥5% decline in $ppFEV_1$ between T1–T5 were analysed separately.

Results

Mean ppFEV1 remained stable overall (79.9% at T1 vs. 82.2% at T5; annual change +0.40%, 95% CI -0.26 to 1.05; p=0.235). Patients with the lowest baseline $ppFEV_1$ (40–69%) improved significantly (59% to 68%; p=0.034), while higher-baseline subgroups remained unchanged. However, 30.4% experienced a clinically meaningful ≥5% decline in $ppFEV_1$ and had significantly higher rates of bronchiectasis (95.8% vs. 79.2%; p=0.030) and current *Pseudomonas aeruginosa* colonisation (25.0% vs. 11.3%; p=0.020). Airway microbiology remained stable across follow-up (p=0.436), and age at diagnosis did not predict longitudinal outcomes.

Conclusions

Lung function remained stable overall despite considerable interindividual heterogeneity. These findings highlight the importance of individualised longitudinal monitoring and extended follow-up to better understand long-term lung function trajectories in PCD.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 2

#82

Discovering the Hidden Burden of Bronchiolitis: Prevalence, Misdiagnosis, and Inappropriate Antibiotic Use in Children of Bangladesh

Prof. A R M Luthful Kabir[1]

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Background

Bronchiolitis was non-existent in Bangladesh government data system till 2000. Any child with cough and respiratory distress was diagnosed as pneumonia, no-pneumonia and severe pneumonia according to WHO-IMCI protocol.

Methodology

Several studies have conducted by the author since 2000 in Bangladesh focusing on the magnitude (43 hospitals from 6 divisions of Bangladesh). Another multicenter RCT on management with or without antibiotics conducted in five different hospitals with the largest sample size ever (295). Finally hogh prevalence of RSV bronchiolitis/ bronchiolitis like illness was identified among WHO-classified pneumonia.

Results

An epidemic of bronchiolitis occured in 2000 and we proved those to be mostly RSV bronchiolitis (Bangladesh J Child Health 2002; Mymensingh Medical Journal 2003). The magnitude of bronchiolitis (21%) was more than pneumonia (11.5%) documented in a nationwide study in U-5 children attending all levels of hospitals of Bangladesh (Jrnl Respiratory Medicine Research Treatment 2016). Bronchiolitis can be managed without antibiotics shown most convincingly in a multi-center randomized controlled study (Acta Paediatrica 2009) and was placed in Cochrane data base (Cochrane Collaboration 2014). In spite of development of lot of evidence about bronchiolitis in Bangladesh, RSV bronchiolitis is still misdiagnosed as WHO-classified pneumonia (in 68% cases) and antibiotics were prescribed in 95% cases in another study (Journal of Global Health 2026).

Conclusion

A high proportion of bronchiolitis are among WHO-classified pneumonia and antimicrobials prescribed. These findings underscored the need for policy makers at WHO and Bangladesh to resolve the overlap between WHO-classified pneumonia and bronchiolitis to minimize overuse of antibiotics.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 3

#87

Demographic, Clinical Characteristics and Treatment Outcomes of Children with Pre-school Wheeze: A Prospective Cohort Study

Dr. Jia-Jian Tang[1], *Prof. Dr. Anna Marie Nathan*[1]

[1]*Universiti Malaya Medical Center, Malaysia*

Background

Preschool wheeze (PSW) is common, yet data from Southeast Asia remains limited, especially regarding their outcome.

Objectives

To describe the demographic, clinical characteristics and treatment outcomes of Malaysian children with newly diagnosed recurrent PSW.

Methods

This prospective cohort study recruited children aged ≤5 years with ≥3 wheeze episodes and/or nebulization, between 1st April 2024 and 28th February 2026. Prematurity and major comorbidities were excluded. Eosinophil counts, total serum Ig E and Skin Prick tests to house dust mites were performed when well.

Results

We recruited 115 children with a mean (SD) age of 2.3 (1.1) years; 61.7% were male. First wheeze started at a median age of 11 months, with a median (range) of 5 (3-18) wheezing episodes requiring general practitioner (GP) or emergency department (ED) visits or hospitalizations. Asthma Predictive Index was positive in 74.5% of participants. Rhinovirus (41.4%) and Respiratory syncytial virus (39.0%) were the most frequently detected respiratory viruses during hospitalization. Majority (72.1%) were initiated on inhaled corticosteroid (ICS) plus short-acting-ß2-Agonist (SABA). During follow-up, median GP/ED visits for nebulization decreased from 4 (IQR 3-5) to 0 (IQR 0-1) per 3-month interval ($p<0.001$), while median hospitalizations declined from 2 (IQR 1-3) to 0 (IQR 0-0) [$p<0.001$]. Mean (SD) TRACK scores improved significantly after 3 months, 76.6 (14.7) to 83.2 (12.6) [$p=0.008$]. Height z-scores improved significantly ($p<0.001$), indicating preserved growth during ICS therapy.

Conclusion

Malaysian preschool wheeze has significant burden but improved with ICS-based therapy.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 3

#22

Three Decades of Journey: Long-Term Efficacy and Safety of Balloon Expandable Metallic Stents (BEMS) in Paediatric Tracheobronchial Narrowing

Dr. Soo-Hong Tan[1], *Dr. Chien Heng Lin*[1], *Prof. Wen Jue Soong*[1,2]

[1]*China Medical University, North District, Taiwan,* [2]*Taipei Veterans General Hospital, Beitou District, Taiwan*

Background

Severe tracheobronchial (TB) narrowing in children requires prompt interventions. Balloon Expandable Metallic Stents (BEMS) offer a less invasive option for maintaining airway patency. This study consolidates a 3-decade experience to evaluate the efficacy, safety, and long-term outcomes of BEMS in paediatric TB management.

Methods

This retrospective review combines data from two hospitals across 3 decades from 1997 till 2025 with a total 212 BEMS implanted on 135 paediatric patients. Flexible bronchoscopy (FB) with non-invasive ventilation was the primary method for BEMS placement and surveillance.

Results

The age at stent insertion ranged from 2 months to 21 years old, with a median of 10 months old and median weight of 7.2kg. The most common underlying aetiology was cardiovascular diseases related airway anomalies which comprised of 39.3%. Most implanted stents were in the trachea 53.3%, others include left main bronchus 23.1%, right main bronchus 12.7%, carina 8.5%, and subglottic region 2.4%. The overall survival rate was 83%. Long-term stent durability was significant which last up to 19 years. Common complications included loose stents 42.9%, granulation tissue 28.6%, distorted stent 21.4%, fractured stent 2.4% and pneumothorax 2.4%. These were effectively managed through FB interventions like balloon dilatation plasty (BDP), laser recanalization and removal. Over 30% of stents were successfully retrieved.

Conclusions

BEMS consistently demonstrates excellent efficacy and safety in paediatric TB management over three decades. Advanced FB techniques and interventional capabilities have optimized stent placement, surveillance, and complication management. BEMS remains a valuable therapeutic option for severe paediatric tracheobronchial narrowing.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 3

#8

Ultrasonographic Assessment of the Diaphragm in Bronchial Asthma Patients and Healthy Controls Aged 3-5 years: A Cross-sectional Study

Dr. Antero Realista[1], *Dr. May-Anne Saba*[1], *Dr. Mary Ann Aison*[1]

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Background

Asthma, a prevalent chronic respiratory disorder in children, can induce diaphragmatic dysfunction due to airflow limitation and lung hyperinflation. Diagnostic evaluation in children aged 3–5 years remains challenging due to limited feasibility of conventional pulmonary tests. This study aims to determine the utility of diaphragm ultrasonography in the diagnosis of bronchial asthma by evaluating the diaphragm excursion and thickness.

Methods

The study employed an analytical cross sectional study design which included children aged 3 to 5 years old diagnosed with controlled bronchial asthma and age-matched healthy children. Diaphragm ultrasound examination was done to compare diaphragmatic excursion and thickness between the two groups.

Results

For the asthmatic group (N=40), the mean diaphragm excursion during inspiration was 1.4±0.3 cm, while the control group (N=40) showed a higher mean excursion of 1.6±0.2 cm (p-value=0.0014). Similarly, during expiration, the asthmatic group's mean diaphragm excursion was 1.0±0.3 cm, compared to 1.2±0.2 cm for the control group (p-value=0.0173). The mean change in excursion between inspiration and expiration did not differ significantly between asthmatic patients 0.3 cm (±0.2 cm) compared to 0.4 cm (±0.2 cm) for the control (p-value=0.1937). The mean diaphragm muscle thickness for the asthmatic group was 0.34±0.09 cm, while the control group was 0.37±0.07cm (p-value=0.085).

Conclusions

Asthmatic patients exhibit reduced diaphragm excursion compared to healthy controls during both inspiration and expiration, highlighting potential implications for respiratory function in asthmatic individuals. Further investigation may be warranted to determine the clinical relevance of the observed non-significant difference in diaphragm muscle thickness among these populations.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 3

#100

Prevalence of Exercise-induced Bronchoconstriction and the Effect of Asthma Control on it among Children with Asthma: Sri Lankan Experience

Dr. Srimali Wijesundara[1], *Dr. Channa De Silva*[2], *prof. Pujitha Wickramasinghe*[3]

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Background/Purpose

Exercise-induced bronchoconstriction (EIB) is a common manifestation in asthmatics. Its prevalence is variable across study populations and methods used to ascertain EIB.

This study has assessed the prevalence of EIB and the effect of asthma control on it, among children with asthma in a tertiary paediatric centre.

Methods

A descriptive cross-sectional study was conducted among diagnosed asthmatics attending the clinics at Lady Ridgeway Hospital for Children. A simple random sampling method was used. The asthma control test (ACT) questionnaires were used to categorise asthma control. Following baseline spirometry, a treadmill exercise challenge was conducted, with post-exercise spirometry to diagnose and classify EIB severity.

Results

A total of 185 were analysed from 225 recruits; the mean age of the sample was 10 (+/- SD 2.32) years, 98(53%) were male, 87(47%) were female. The prevalence of EIB was 33.5% (62). And 87.1% (54/62) had mild and 12.9% (8/62) had moderate severity.

According to the age-appropriate ACT scores, 20.5% (38/185), 57.3% (106/185) and 22.2% (41/185) were fully, partially, and uncontrolled, respectively. A statistically significant association between asthma control and EIB was not found (p = 0.357).

Conclusions

One third of children with asthma were found to have EIB. In those, one in 7 had significant EIB with moderate severity. As there is no significant association between asthma control and EIB, exercise testing is recommended despite satisfactory asthma control. The main limitation of the study was the number of participants and the dropouts; further studies with more participants would be more informative.

Call for Abstracts

31 Oct, Saturday

Parallel Free Paper Oral Presentation 3

#150

Feasibility, Early Clinical Outcomes, and Safety of Elexacaftor-Tezacaftor-Ivacaftor in Indian Patients with Cystic Fibrosis: A Pilot Study

Dr. Vishal Vishnuram Samaga[1], *Dr. Parmarth Chandane*[1]

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Background

Cystic Fibrosis Trans-membrane conductance Regulator (CFTR) modulators have transformed cystic fibrosis (CF) outcomes globally. However, access in low-and-middle-income countries like India remains critically delayed due to prohibitive costs, regulatory hurdles, and a lack of indigenous manufacturing, leaving a gap in prospective real-world data. This study aims to evaluate the feasibility of a structured access and monitoring protocol for elexacaftor-tezacaftor-ivacaftor (ETI) in India, alongside assessing its safety and 6-month early clinical response.

Methods

A prospective pilot study was conducted over 6 months (July 2025–January 2026) at a tertiary pediatric centre in Mumbai. The study enrolled 40 patients (median age: 13 years; 47.5% male, 52.5% female). Outcomes tracked included feasibility (supply continuity, adherence, retention), safety profiles, growth parameters, clinical symptoms, and disease activity metrics.

Results

The structured protocol demonstrated excellent feasibility, achieving 100% supply continuity, therapeutic adherence, and patient retention at 6 months. Patients exhibited statistically significant gains in weight and height ($p<0.001$). Clinical responses included rapid, marked improvements in cough and expectoration, and the clearance of dyspnea and oily stools. Vital respiratory metrics significantly improved ($p<0.05$), alongside robust, statistically significant improvements in FEV1 (6M: $p=0.0003$), FVC (6M: $p=0.0006$), and sweat chloride levels ($p<0.001$). ETI was generally well-tolerated. The most frequent adverse events were skin reactions (30.0%) and neuropsychiatric events (10.0%), which were managed successfully. Hepatic tolerability was excellent, and one rare case of premature thelarche was resolved via a modified dosing regimen.

Conclusion

This study confirms the marked clinical efficacy and manageable safety profile of CFTR modulators in a tertiary-care setting in India. Furthermore, it provides a proven, scalable blueprint for successfully delivering high-cost orphan drugs in resource-limited regions.

Acknowledgement

The Organizing Committee would like to extend their heartfelt thanks to the following healthcare industry partners for their generous support!

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