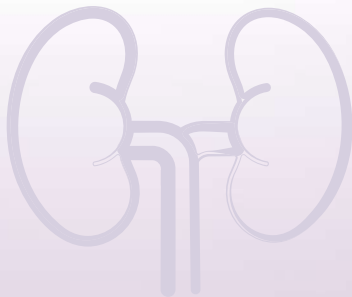


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ADVANCES IN PAEDIATRICS 2024



Theme:
Nephrology and Intensive
Care Medicine

23 - 24 NOVEMBER 2024 (SAT & SUN)

PROGRAMME BOOK

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Welcoming Message

Welcome to the Advances in Paediatrics 2024 organised by the Department of Paediatrics, The Chinese University of Hong Kong.

It is not easy to develop a conference programme that meets the needs of all the healthcare professionals involved in paediatrics. Our conference will focus on nephrology and intensive care medicine. Like previous years, the programme aims to equip our audience with the latest knowledge on essential and common topics from each subspecialty. We are honoured to have six renowned international experts and a team of experienced local clinicians providing updates on significant developments in the two main specialties. I want to thank my fellow committee members for their hard work in preparing for this conference over the past 12 months. I hope you will find the conference both educational and enjoyable.

Prof. Albert M Li

Chairperson

Organising Committee

Organising Committee

Prof. Albert Martin LI (Chairperson)

Dr. Kate CHAN (Co-Chairperson)

Dr. Eugene CHAN

Dr. Lawrence CHAN

Dr. Amy CHENG

Dr. Hon Ming CHEUNG

Dr. Wai Ming LAI

Dr. Anna LIN

Dr. Alison Lap-tak MA

Dr. Steve SZE

Ms. Emily KWOK

Programme Schedule



23 November 2024, Saturday

Session A - General Nephrology (09:00 - 10:45)

Chairpersons: Dr. Wai Ming LAI / Dr. Pak Chiu TONG

09:00 – 09:25	Genetic Kidney Diseases Prof. Qian SHEN
09:25 – 09:35	Discussion
09:35 – 10:00	Nephrogenetics Dr. Ho Ming LUK
10:00 – 10:10	Discussion
10:10 – 10:35	Hypertension in Children Prof. Stephen MARKS
10:35 – 10:45	Discussion

TEA-BREAK (10:45 - 11:00)

Session B – Renal Support & Extracorporeal Therapies (11:00 - 12:45)

Chairpersons: Dr. Kam Lun HON / Dr. Lawrence CHAN

11:00 – 11:25	Fluid Assessment in Critically Ill Children Dr. Ben GELBART
11:25 – 11:35	Discussion
11:35 – 12:00	Novel Extracorporeal Therapies In PICU Dr. Alvin HUI
12:00 – 12:10	Discussion
12:10 – 12:35	Practical Elements Of CRRT Dr. Ben GELBART
12:35 – 12:45	Discussion

LUNCH (12:45 - 13:45)

Plenary Lecture (13:45 - 14:15)

Chairpersons: Prof. Hong XU / Dr. Alison Lap-tak MA

13:45 – 14:15	Unique Considerations In Managing Paediatric Lupus Nephritis Prof. Stephen MARKS
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Session C – Glomerular Diseases (14:15 - 16:00)

Chairpersons: Dr. Eugene CHAN / Dr. Lawrence CHAN

14:15 – 14:40	Overview Of Chronic Kidney Disease And Measures For Slowing Disease Progression Prof. Qian SHEN
14:40 – 14:50	Discussion
14:50 – 15:15	Thrombotic Microangiopathy In Children – An Overview Dr. Alison Lap-tak MA
15:15 – 15:25	Discussion
15:25 – 15:50	Acute Nephritic Syndrome And Rapidly Progressive Glomerulonephritis (RPGN) Prof. Stephen MARKS
15:50 – 16:00	Discussion

TEA-BREAK (16:00 - 16:15)

Plenary Lecture (16:15 - 16:45)

Chairpersons: Dr. Hon Ming CHEUNG / Dr. Kam Lau CHEUNG

16:15 – 16:45	Learning From PICU Mortality And Morbidity Auditing For Future Improvement Prof. Trevor DUKE
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Session D - Resuscitation And Cardiopulmonary Support (16:45 - 17:55)

Chairpersons: Dr. Hon Ming CHEUNG / Dr. Shu Wing KU

16:45 – 17:10	Resuscitation In The Emergency Department: The Role Of A Paediatric Emergency Physician Dr. Shu Ling CHONG
17:10 – 17:20	Discussion
17:20 – 17:45	Paediatric ECMO In Distributive Shock – Experience In HK Dr. Robin CHEN, Dr. Andy KWOK
17:45 – 17:55	Discussion

END OF DAY 1

Programme Schedule



24 November 2024, Sunday

Session E - Paediatric Urology And Nephrology (09:00 - 10:45)

Chairpersons: Dr. Sammi Yuen Shan WONG / Dr. Fanny Tsz Wai HO

09:00 – 09:25	Nephrotic Syndrome: What'S New In 2024	Dr. Eugene CHAN
09:25 – 09:35	Discussion	
09:35 – 10:00	Congenital Hydronephrosis and Upper Urinary Tract Obstruction	Dr. Peter TAM
10:00 – 10:10	Discussion	
10:10 – 10:35	UTI And Enuresis: Updates On Management	Prof. Qian SHEN
10:35 – 10:45	Discussion	

TEA-BREAK (10:45 - 11:00)

Session F – Difficult Nephrology Cases For Discussion (11:00 - 12:00)

Chairpersons: Dr. Kin Yip YEUNG / Dr. David LUK

11:00 – 11:20	Dr. Mattew Hon Lam LEE
11:20 – 11:40	Dr. Karen Kin Nam WONG
11:40 – 12:00	Dr. Bestain Ka Nam AU

Sponsored Talk (12:00 - 12:40)

Chairperson: Prof. Albert Martin Man Chim LI

12:00 – 12:40	Integrating Pulmonary And Acute Care With The Impact Of Nusinersen On Respiratory Function In Pediatric Spinal Muscular Atrophy	Dr. Leanne GAULD
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LUNCH (12:40 - 13:40)

Plenary Lecture (13:40 - 14:10)

Chairpersons: Dr. Hon Ming CHEUNG / Dr. Anna LIN

13:40 – 14:10	Fluid Bolus Therapy In Paediatric Sepsis: How Much Fluids Is Too Much?	Dr. Ben GELBART
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Session G - Updates In Sepsis Management (14:10 - 15:20)

Chairpersons: Dr. Hon Ming CHEUNG / Dr. Steve SZE

14:10 – 14:35	Early Identification Of Bacterial Sepsis	Dr. Shu Ling CHONG
14:35 – 14:45	Discussion	
14:45 – 15:10	Defining Paediatric Sepsis	Dr. Anna LIN
15:10 – 15:20	Discussion	

TEA-BREAK (15:20 - 15:35)

Session H - Neuro-Critical Care (15:35 - 17:20)

Chairpersons: Dr. Hon Ming CHEUNG / Dr. Lawrence CHAN

15:35 – 16:00	Surgical Management Of Head Trauma 123	Dr. Emily CHAN
16:00 – 16:10	Discussion	
16:10 – 16:35	Monitoring In Neuro-Critical Care: Modalities, Indications And Practicality	Dr. Steve SZE
16:35 – 16:45	Discussion	
16:45 – 17:10	Paediatric Traumatic Brain Injury: Patterns Observed From PACCMAN Studies	Dr. Shu Ling CHONG
17:10 – 17:20	Discussion	

END OF DAY 2

係咁打乞嚏，
講壞話以為我唔知!?



每日1次¹

鼻眼適



連續12年
銷售No.1^{3,4}

有效舒緩鼻敏感症狀¹
無藥味、無倒流²
大人小朋友都用得^{*1}

*兩歲或以上適用

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Reference: 1. Avamys Hong Kong Prescribing Information Version GDS11v4/TGA20181204. 2. Berger BE, Godfrey JW, Slater AL. Intranasal corticosteroids: the development of a drug delivery device for fluticasone furoate as a potential step toward improved compliance. Expert Opin. Drug Deliv 2007 4(6): 689-701. 3. IQVIA Sales Data (GP Channel) in class R01A1 (NASAL CORTIC W/O ANTI-INTF), 2015-2020. 4. HKAPI Sales Data (Private) in class R1A (Topical Nasal Preparations), 2009-2014

Safety Information: AVAMYS is contraindicated in patients with a history of hypersensitivity to any components of the preparations. As with all intranasal corticosteroids, the total systemic burden of corticosteroids should be considered whenever other forms of corticosteroids are prescribed concurrently. Infection of the nasal airways should be appropriately treated but does not constitute a contraindication to treatment with AVAMYS. Nasopharyngeal candidiasis can occur in patients treated with intranasal steroids, as a class effect. The lowest dose of AVAMYS that causes suppression of the HPA axis, effects on bone mineral density or growth retardation has not yet been established. However, the systemic bioavailability of fluticasone furoate is low (estimated at 0.50%) when given as AVAMYS and this limits the potential for systemic side effects. As with other intranasal corticosteroids, physicians should be alert for evidence of systemic effects including ocular changes. Growth retardation has been reported in children receiving some nasal corticosteroids at licensed doses. It is recommended that the height of children receiving prolonged treatment with nasal corticosteroids is regularly monitored. No clinical studies have been conducted to investigate interactions of fluticasone furoate on other drugs. Based on data with another glucocorticoid metabolised by CYP3A4, co-administration with ritonavir is not recommended because of the potential risk of increased systemic exposure to fluticasone furoate. Adverse Reactions: Very common; epistaxis and nasopharyngitis, Common; nasal ulcerations and headache.

Session Chairpersons' Biographies



Dr. Eugene CHAN

Associate Professor, Department of Paediatrics,
The Chinese University of Hong Kong

Dr. Eugene CHAN works as in the Paediatric Nephrology Centre, Hong Kong Children's Hospital, which is the designated, territory-wide paediatric referral centre for complex kidney conditions and kidney replacement therapy including dialysis and transplantation. He further pursued oversea training in world renowned hospitals including the Great Ormond Street Hospital (UK) and the Children's Mercy Hospital (USA), focusing in the care of idiopathic nephrotic syndrome and kidney failure.

His research focus includes nephrotic syndrome, glomerulonephritis and kidney failure. Since 2019, he led and conducted a number of multicentre, international projects on the use of rituximab in childhood nephrotic syndrome. These studies have been published in the two leading peer-reviewed international journals in the field of nephrology, including the, Journal of American Society of Nephrology and Kidney International.

He currently serves as a co-chair in the Professional Education Committee of the International Paediatric Nephrology Association, a Junior Council member in the Asian Paediatric Nephrology Association and a council member of the Hong Kong Society of Paediatric Nephrology. He devotes a significant effort in providing high quality paediatric nephrology education for paediatric nephrologists, paediatric trainees, primary doctors and allied health colleagues around the world who care for children with kidney disorder.

In recognition of his contributions to Paediatric Nephrology, he has been awarded the Young Nephrologist Award from the International Society of Nephrology (2019), Gold & Silver Medal Awards for Original Research from the Hong Kong Academy of Medicine (2020 & 2022), as well as the Outstanding Team Award and Young Achiever Award from the Hong Kong Hospital Authority (2017 & 2022).



Dr. Lawrence CHAN

Associate Consultant
Department of Paediatrics, Prince of Wales Hospital

Dr. Lawrence Chi Ngong Chan is an Associate Consultant in the Department of Paediatrics at Prince of Wales Hospital and an Honorary Clinical Associate Professor at the Chinese University of Hong Kong (CUHK).

He has specialized interests in paediatric intensive care and has completed a clinical fellowship in Pediatric Critical Care Medicine at the Hospital for Sick Children (SickKids) in Toronto. Additionally, he is engaged in advancing neonatal intensive care and paediatric palliative care.

Dr. Chan is deeply committed to medical education and currently serves as the Assistant Medical Assistant Educationist for the Hong Kong Academy of Medicine. He has particular interest in simulation-based education, and serves as senior faculty of the Comprehensive Simulation Educator Course at the HKAM Hong Kong Jockey Club Innovative Learning Centre for Medicine (HKJC ILCM). As a credentialed simulation instructor (Cat. C - HKJC ILCM), he has taught various clinical simulation courses for the Hospital Authority and the Hong Kong College of Paediatricians. He is a certified instructor in Pediatric Advanced Life Support (American Heart Association), and his educational initiatives encompass paediatric resuscitation, neonatal stabilization, paediatric palliative care, and crew resource management.

Dr. Chan is also passionate about the development and application of point-of-care ultrasound in neonatal and paediatric intensive care settings, and has undergone critical care ultrasound training through the Society of Critical Care Medicine. As an advocate of point-of-care ultrasound education, he has organized training for paediatric residents and fellows, and was the chairperson for the Advances in Paediatrics Neonatal Point-of-Care Ultrasound Course 2023 (CUHK).

Session Chairpersons' Biographies



Dr. Hon Ming CHEUNG

Physician-in-charge,
Paediatrics Intensive Care Unit and Deputy Hospital Chief Executive
Prince of Wales Hospital

Dr Cheung Hon Ming graduated from the University of Hong Kong and received his paediatric specialty training in Prince of Wales Hospital, Hong Kong. Dr Cheung Hon Ming continued his career working in Neonatal Unit and Paediatric Intensive Care Unit in Prince of Wales Hospital. Dr Cheung Hon Ming received his overseas training in Miami Children's Hospital, Florida, U.S.A. Dr Cheung Hon Ming became the Consultant of Department of Paediatrics, PWH in year 2017. Dr Cheung Hon Ming currently the physician-in-charge of Paediatrics Intensive Care Unit, PWH and the Deputy Hospital Chief Executive of Prince of Wales Hospital, HKSAR.



Dr. Kam Lau CHEUNG

Director, Neonatal Service and Consultant Paediatrician, Chinese University of
HK Medical Centre
Honorary Clinical Associate Professor, Department of Paediatrics,
The Chinese University of Hong Kong

PROFESSIONAL QUALIFICATIONS

MBBS (H.K.U.), MRCP (U.K.), DCH (Glasgow), DCH (Ireland), Fellow HKCPaed, Fellow HKAM (Paed),
FRCP (Glasgow), FRCPCH (UK),

HKCPaed Accredited trainer for Paediatric and Neonatal Intensive Care since 1997

AHA/AAP Accredited Instructor PALS, NRP courses since 2013

AHA PALS training centre faculty since 2016

SPECIALTY

Neonatal and Paediatric Intensive Care

OFFICE-BEARER OF PROFESSIONAL SOCIETIES:

Honorary Deputy Secretary of Hong Kong Paediatric Society, 1994-1995

Official spokesman in Paediatric Intensive Care, Hong Kong Paediatric Society 1998 Council member
of The Hong Kong Society of Paediatric Respiriology 2000-2008

Council member of Hong Kong Neonatal Society 2000-present

Council member of Hong Kong College of Paediatricians Foundation 2014- 2016 Chairman of Hong
Kong College of Paediatricians Foundation 2016- present

EXAMINER IN PROFESSIONAL EXAMINATIONS

Examiner in Professional Examination for medical students in Paediatrics, CUHK. Examiner in
Licentiate Examination, Medical Council of Hong Kong, since 2001 till present

Examiner in MRCPCH examination, Royal College of Paediatrics and Child Health, UK, 2006-present

Examiner in Fellowship Exit examination, Hong Kong College of Paediatricians, 2006- Present

INVITED REVIEWER FOR SCIENTIFIC JOURNALS:

Acta Paediatrica

Hong Kong Medical Journal

Hong Kong Journal of Paediatrics

Singapore Medical Journal



Dr. Fanny Tsz Wai HO

Associate Consultant, Paediatric Nephrology Centre,
Hong Kong Children's Hospital

Dr. Fanny Ho Tsz Wai Ho is the Associate Consultant of the Paediatric Nephrology Centre in Hong
Kong Children's Hospital. She has worked closely with the Paediatric Surgeons on management of
children with CAKUT and urinary tract infection throughout her clinical years. She is also a member
of the Paediatric Enuresis Workgroup to develop local guidelines on management of urinary
incontinence.

Session Chairpersons' Biographies



Dr. Kam Lun HON

Consultant, CUHK Medical Centre
Professor, Practice/Clinical Professional Consultant, Department of Paediatrics,
Director, CCTCM Institute of Chinese Medicine,
The Chinese University of Hong Kong

Dr. Kam Lun HON is (1) Consultant at the CUHK Medical Centre, (2) Professor of Practice/Clinical Professional Consultant, Department of Paediatrics, and (3) Director, CCTCM Institute of Chinese Medicine, The Chinese University of Hong Kong. He received undergraduate medical education at the University of Western Australia. He is a Fellow of the American Academy of Pediatricians (FAAP) and Fellow of Critical Care Medicine (FCCM). He received his Doctor of Medicine (MD) at the Chinese University of Hong Kong. He is the President of the Hong Kong Society of Paediatric Respiriology and Allergy, Vice President of the Hong Kong Paediatric and Adolescent dermatology Society. He has authored and co-authored over 500 peer-reviewed scientific papers, books and book chapters. He has performed extensive research on atopic diseases, traditional Chinese medicine and many paediatric critical care and health issues. He is particularly keen to promote health in children + their family and educate parents to dismiss a lot of myths and fallacies that hinder good child health in Hong Kong.



Dr. Shu Wing KU

Consultant, Paediatric Intensive Care Unit,
Hong Kong Children's Hospital

MBBS, MRCP, DCH, FHKCPaed. FHKAM(Paediatrics), FHKCA. FHKAM(Anaesthesiology), FANZCA, FCICM, MHSM, MSc(Biomedical Engineering)

Dr. Ku is a paediatric intensivist. Currently he is the consultant of the Paediatric Intensive Care Unit of Hong Kong Children's Hospital. He had received training in the fields of paediatrics, anaesthesiology and intensive care medicine in various hospitals in Hong Kong as well as overseas ICU experience in Australia, Japan and Sweden. He has multiple publications in medical literature on topics in paediatrics and anaesthesiology. He also participates in multiple teaching activities. He is an instructor of many simulation training courses including Paediatric Advanced Life Support, paediatric sedation safety, paediatric airway management. He is also an Honorary Clinical Associate Professor of the Department of Paediatrics of the Chinese University of Hong Kong.

Dr. Ku is the Founding President of the newly formed professional organization "Hong Kong Society of Paediatric Critical Care Medicine".



Dr. Wai Ming LAI

Consultant and Former Service Head, Paediatric Nephrology Center,
Hong Kong Children's Hospital
The President, Hong Kong Pediatric Nephrology Society

Dr. Lai Wai Ming is the Consultant and former Service Head of the Paediatric Nephrology Center at the Hong Kong Children's Hospital. He completed his medical training at the University of Hong Kong and pursued specialized nephrology training at the Great Ormond Street Hospital for Children in London and The Hospital for Sick Children in Toronto, Canada.

Dr. Lai is committed to advancing paediatric nephrology services in Hong Kong. He established the Paediatric Nephrology Center at Princess Margaret Hospital in 1999 and at Hong Kong Children's Hospital in 2019.

In addition to his clinical work, Dr. Lai serves as the President of the Hong Kong Paediatric Nephrology Society and is the Treasurer of the Asian Pediatric Nephrology Association, reflecting his dedication to the field and the development of regional pediatric nephrology service.

Session Chairpersons' Biographies



Prof. Albert Martin Man Chim LI

Assistant Dean (Student Affairs), Faculty of Medicine
Chairman & Professor of Paediatrics, Department of Paediatrics
Director, Hong Kong Hub of Paediatric Excellence (HK HOPE)

Prof. Albert Martin Man Chim LI is currently Professor of Paediatrics and Chairman at the Department of Paediatrics of the Chinese University of Hong Kong. He graduated from the School of Medicine, Cardiff University in 1993 and moved back to Hong Kong in 1998. He joined the Chinese University of Hong Kong as assistant professor in 2001. His research interests are in paediatric respiratory and sleep medicine and childhood obesity. Recently he has been focusing on the ill effects of inadequate sleep in pre-schoolers and adolescents.

He is Director of the Chinese University of Hong Kong Hub of Paediatric Excellence ensuring top-notch research work takes place at the Hong Kong Children's Hospital and establishing research collaboration between different faculties of the Chinese University of Hong Kong, and Assistant Dean looking after the Global Physician-Leadership Stream of the medical curriculum and non-JUPAS student admission to the faculty.

He also works as the vice-president of the Asia Pacific Paediatric Sleep Alliance.



Dr. Anna LIN

Associate Consultant, Department of Paediatrics, Prince of Wales Hospital

Dr Anna LIN is a paediatric specialist with an interest in paediatric intensive care. Her outstanding academic achievements earned her early admission to the medical faculty of The Chinese University of Hong Kong, following which she earned her medical degree in 2012. She won numerous academic awards and scholarships, notably Distinction in Paediatrics. Dr Lin subsequently joined the Department of Paediatrics, Prince of Wales Hospital, The Chinese University of Hong Kong, where she continues to practice. She obtained her fellowship from the Hong Kong College of Paediatricians and the Hong Kong Academy of Medicine in 2019, where her research paper was awarded the coveted Best Dissertation Prize and she was also honoured as a Distinguished Young Fellow by the Academy. Dr Lin has since dedicated herself to paediatric intensive care, and was granted the HM Lui Fellowship Award whereby she completed a 1 year overseas fellowship at the Royal Children's Hospital, Melbourne in 2024.



Dr. David LUK

Specialist in Paediatrics, Consultant Paediatrician,
United Christian Hospital, Hong Kong Children's Hospital

Dr David LUK is the Consultant of the Department of Paediatrics and Adolescent Medicine of the United Christian Hospital and the Department of Dermatology of the Hong Kong Children's Hospital. He is the Honorary Clinical Associate Professor of the Chinese University of Hong Kong and the University of Hong Kong. Dr. Luk had been trained under late Prof. John Harper of Great Ormond Street Hospital for Children and Prof. Finlay of the Cardiff University. He has specialized in the field of paediatric skin diseases and his research areas include congenital cutaneous vascular anomalies, laser therapy and dermoscopy. He has established the Paediatric Dermatology Service Network of the Hong Kong Hospital Authority and founded the Children's Skin Centre. He has co-authored the book on Paediatric Dermatology in Asia, established the Birthmark Laser Centre in Hong Kong, received Scholarship from the British Government to complete his Master training in dermatology and was awarded the First Prize for his academic achievements. He is also the Associate Editor of the Harper's Textbook of Pediatric Dermatology. He has received multiple public grants for his research in dermatology. He is now the President of the Hong Kong Paediatric and Adolescent Dermatology Society and the Vice President of the Hong Kong Paediatric Society. From 2004-2013, he was the Honorary Teaching Associate of the Cardiff University and organized the Diploma of Practical Dermatology (University of Wales College of Medicine - teaching and examination) in Hong Kong. Dr Luk is an Accredited College Trainer of the Hong Kong College of Paediatricians and the Honorary Clinical Supervisor of the Hong Kong College of Family Physicians.

Session Chairpersons' Biographies



Dr. Alison Lap-tak MA

Consultant and Service Head (Paediatric Nephrology),
Hong Kong Children's Hospital

Dr. Alison Lap-tak MA is the Consultant and Service Head of Paediatric Nephrology at the Hong Kong Children's Hospital. She is also the honorary clinical associate professor of University of Hong Kong and Chinese University of Hong Kong. Dr Ma graduated from the faculty of Medicine, University of Hong Kong and completed her paediatric training in Princess Margaret Hospital followed by training in Paediatric Nephrology in Great Ormond Street Hospital in London.

Dr Ma has received a number of local and international awards including the Best presentation award in the Young Nephrologists' symposium at European Society of Paediatric Nephrology, Bill Marshall Scholarship from Institute of Child health, and Outstanding Young Fellow award by Hong Kong Academy of medicine. Dr Ma's research interests include atypical haemolytic uremic syndrome (aHUS), nephrotic syndrome, transplant and optimization of care for children with kidney diseases. Dr Ma has authored a number of publications in leading nephrology journals including Kidney International and JASN.

Dr Ma is currently the Honorary secretary of Hong Kong Paediatric Nephrology Society. She is also a committee member of the Patient Education Committee and atypical HUS global guideline group of International Pediatric Nephrology Society (IPNA), CME committee of Asia Pacific Society of Nephrology (APSN), membership committee of International Pediatric Transplant Association (IPTA) and council member of Asian Society of Transplantation (AST). Dr Ma is a council member of the Children's Kidney Fund, and the co-founder of the Kids' dream choir for children with kidney diseases, promoting organ donation and kidney health with music.



Dr. Steve SZE

Associate Consultant, Department of Paediatrics, Prince of Wales Hospital

Dr. Steve SZE is a paediatrician who has special interest in paediatric critical care. He graduated from the Chinese University of Hong Kong and has been providing care in PICU and NICU since then. He has worked in different local PICUs and also AICU. Currently he is an Associate Consultant in Department of Paediatrics at Prince of Wales Hospital in Hong Kong.



Dr. Pak Chiu TONG

Associate Consultant, Nephrology Centre, Hong Kong Children's Hospital

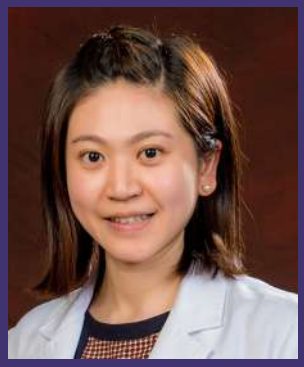
Associate Consultant of Nephrology Centre, Hong Kong Children's Hospital since 2019, worked in Paediatric Nephrology Center of Princess Margaret Hospital since 1999.

Graduated from University of Hong Kong and obtained MBBS degree in 1994, obtained MRCP in 1999, and obtained Fellowship in Hong Kong Paediatric College in 2002.

Attended training in Great Ormond Street Hospital, London in 2001 under Bill Marshall Scholarship and overseas attachment in Toronto Sick Kids Hospital, Canada and UCLA, USA in 2009.

Appointed honorary clinical associate Professor of Department of Paediatric, Chinese University of Hong Kong since 2011 and honorary clinical associate Professor of Department of Paediatric, University of Hong Kong since 2012. Obtained Master degree in Public Health in 2012

Session Chairpersons' Biographies



Dr. Sammi Yuen Shan WONG

Associate Consultant, Department of Paediatric Surgery, Hong Kong Children's Hospital
Honorary Clinical Assistant Professor, Department of Surgery, The Chinese University of Hong Kong

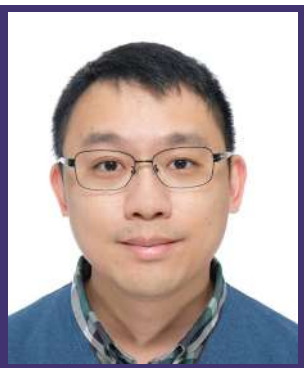
Dr. Sammi Wong Yuen Shan is currently an associate consultant of the Department of Paediatric Surgery of the Hong Kong Children's hospital, as well as an honorary clinical assistant professor of the Department of Surgery of the Chinese University of Hong Kong. After her acquisition of the qualifications for being a specialist in paediatric surgery in 2015, Dr. Wong has subspecialised in paediatric urology. She received her overseas training in paediatric urology at world-renowned institutions including Great Ormond Street Hospital for Children, Evelina London Children's Hospital and Royal Children's Hospital in Melbourne. Dr. Wong has special interests in robotic surgery in reconstructive urology, hypospadias surgery, and disorders of sex development on which she has published extensively as first-author in peer-reviewed medical journals.



Prof. Hong XU

MD, PhD, Professor of Pediatrics,
Children's Hospital of Fudan University, Shanghai, China

Prof. XU is the Chair of Chinese Pediatric Nephrologist Association, Chair of Rare Disease Specialized Committee of Shanghai Medical Doctor Association and Vice Chair of Nephrology Society of Shanghai Medical Association. Prof. XU also serves as the Director of Shanghai Renal Development and Pediatric Nephrology Institution, former council member of International Pediatric Nephrology Association (IPNA), Chief of IPNA Fellowship Training Center (Shanghai China). Professor Xu's research interests include the integration management program for CKD children, developing renal replacement therapy program for ESKD children in China, genetics and pathogenesis of genetic kidney disease, clinical treatment of nephrotic syndrome, lupus, enuresis, and so on. Prof. XU conducted numerous collaboration studies and workshops on genetic kidney disease, nephrotic syndrome, pediatric dialysis/kidney transplantation and enuresis. Prof. XU was also the President of the 16th Congress of International Pediatric Nephrology Association in August 2013 and got the First Prize of 2021 Shanghai Medical Science and Technology Award.



Dr. Kin Yip YEUNG

Associate Consultant, Department of Paediatrics & Adolescent Medicine,
Tuen Mun Hospital

Since graduating from the Faculty of Medicine at the Chinese University of Hong Kong in 2005, Dr. Yeung has been dedicated to the paediatric unit at Tuen Mun Hospital. He became a specialist in paediatrics in 2012.

Dr. Yeung has a particular interest in paediatric nephrology and intensive care. He completed his paediatric nephrology training in the Division of Paediatric Nephrology at Princess Margaret Hospital in 2011. In 2016, he furthered his expertise with overseas training in paediatric intensive care at the Children's Intensive Care Unit (CICU) at KK Women's and Children's Hospital in Singapore. He has served as a council member of the Hong Kong Paediatric Nephrology Society since 2016.

Dr. Yeung is passionate about simulation training and actively instructs in Pediatric Advanced Life Support (PALS), the Newborn Resuscitation Program (NRP), Crew Resource Management, and safe sedation courses for both adult and pediatric patients.

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1. Koledova E, Stoyanov G, Ovbude L, Davies PS. 2018 Aug 1;7(8):914-23.



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Speakers' Biographies



Dr. Bestain Ka Nam AU

Associate Consultant, Department of Paediatrics & Adolescent Medicine, Tuen Mun Hospital

Dr. Au is an Associate Consultant in Tuen Mun Hospital, honorary clinical associate professor at Department of Paediatrics in both CUHK and HKU, as well as honorary clinical supervisor of the Hong Kong College of Family Physicians. After graduating from CUHK, he has undergone his training in Kwong Wah Hospital and achieved his fellowship in paediatrics in 2021. Influenced by his mentor Dr Lettie Leung, he developed immense interest in paediatric nephrology and paediatric rheumatology early in his career. Dr. Au is actively engaged in research, collaborating on inter-hospital studies in both paediatric nephrology and rheumatology. He is also currently the Honorary Treasurer and Council Member of the Hong Kong Society for Pediatric Rheumatology.



Dr. Emily CHAN

Associate Consultant, Neurosurgery, Prince of Wales Hospital

Dr. CHAN obtained her medical degree from the Chinese University of Hong Kong in 2008. She went on to complete her specialist training in Neurosurgery in Prince of Wales Hospital. She was appointed Associate Consultant in the Department of Neurosurgery in the Prince of Wales Hospital in 2017. She has a part time role in the Department of Neurosurgery of the Hong Kong Children's Hospital. Her special interests include Paediatric Neurosurgery, Skull Base surgery and Epilepsy surgery. She is currently also a council member of the Hong Kong Epilepsy Society.



Dr. Robin CHEN

Consultant, Cardiology Centre
Co-director, Extracorporeal Membrane Oxygenation (ECMO) Centre
Hong Kong Children's Hospital

After obtaining his medical degree from the University of Hong Kong (HKU) in 2002, and completing paediatric fellowship in 2009, Dr Robin CHEN received his paediatric cardiology training at the Department of Paediatric Cardiology, Grantham Hospital and later at Queen Mary Hospital. He has undergone further training in interventional cardiology at the Great Ormond Street Hospital for Children, London, UK in 2016. After returning from UK, Dr Chen has been serving as consultant at Department of Paediatric Cardiology since 2017 and is currently consultant of Cardiology Centre and Co-director of extracorporeal membrane oxygenation (ECMO) centre of the Hong Kong Children's Hospital. His area of interest includes interventional cardiology in paediatric and adult congenital heart diseases, 3D printing in congenital heart diseases and extracorporeal life support (ECLS) for paediatric patients. In recent years, he is also engaged in developing hybrid interventions, diagnostic and intervention program for lymphatic flow disorder and has been leading a clinical trial of self-expandable transcatheter pulmonary valve replacement.

Speakers' Biographies



Dr. Shu Ling CHONG

Senior Staff Physician, KK Women's and Children's Hospital
Singapore

Dr Shu-Ling CHONG is a Senior Staff Physician in the Department of Emergency Medicine (KK Women's and Children's Hospital) and a Clinical Associate Professor with the Duke-NUS Medical School, Singapore. She graduated with MBBS in 2005, Master of Clinical Investigation (MCI) in 2016, and went on to obtain her Master of Public Health (MPH) in the Harvard Chan School of Public Health in 2017. Dr CHONG's research interests are in paediatric acquired brain injury including traumatic brain injury (TBI), and she has led multi-centre TBI research projects in Asia and Latin America. She is also interested in health services research that investigates how clinical prediction rules in the Emergency Department aid clinicians in decision-making.



Prof. Trevor DUKE

Clinical Director, General Intensive Care Unit, Royal Children's Hospital
Professor, Department of Paediatrics, University of Melbourne
Melbourne, Australia

Trevor DUKE, paediatrician, clinical director of the General Intensive Care Unit at the Royal Children's Hospital in Melbourne, professor in the University of Melbourne Department of Paediatrics. Professor of Child Health at the School of Medicine and Health Sciences, University of Papua New Guinea. Consultant to WHO on quality of paediatric care; editor of the WHO Pocketbook of Hospital Care for Children, WHO Guidelines on Oxygen Therapy for Children, and WHO Guidelines for Child Morbidity and Mortality Auditing.

Editor of Randomised Trials in Child and Adolescent Health in Developing Countries, up to 21st annual edition: <https://pngpaediatricsociety.org/research-2/>

YouTube channel: https://www.youtube.com/channel/UCnNETOcOMRpcLXQbZi6O2Yw/videos?view=0&sort=dd&shelf_id=0



Dr. Leanne GAULD

Paediatric Respiratory and Sleep Medicine Physician
Queensland

Dr Leanne GAULD graduated from the University of Queensland with a Bachelor of Medicine and Bachelor of Surgery in 1993. She undertook her intern year at the Royal Brisbane Hospital, before beginning her General Paediatric training. Leanne completed her General Paediatric training at the Royal Children's Hospital in Brisbane and Monash Medical Centre in Melbourne. While completing this training, she began sub-specialty training in Respiratory and Sleep Medicine at the Royal Children's Hospital in Melbourne, Monash Medical Centre and Sydney Children's Hospital. She completed her Respiratory and Sleep Training in 2003. Her first consultant job was at The Children's Hospital, Westmead where she worked as the Acting Director of the Sleep Unit for 2 years. In 2006, Leanne returned to Brisbane as a Respiratory and Sleep Specialist where she has remained caring for children with a variety of Respiratory and Sleep problems. Her special areas of interest are children with neuromuscular weakness and home ventilation.

Speakers' Biographies



Dr. Ben GELBART

Intensive Care Specialist, Paediatric Intensive Care Unit, Royal Children's Hospital Melbourne, Australia

Ben GELBART is a paediatric intensive care specialist at the Royal Children's Hospital, research fellow at the Murdoch Children's Research Institute and an honorary fellow at the University of Melbourne, Departments of Critical Care and Paediatrics. He is also the past vice president of the Australian and New Zealand Intensive Care Society - Paediatric Study Group (ANZICS-PSG). Ben has been the principal investigator of a randomised trial in children with bronchiolitis and collaborated on several other multicentre randomised trials. He completed his doctoral thesis on quantifying oedema in November 2023.

He remains an active member of the ANZICS-PSG and a member of the recently developed International Paediatric Intensive Care Trials Collaborative. He is an associate editor of the ANZ based intensive care journal; Critical Care and Resuscitation and regularly reviews manuscripts for a range of paediatric journals.



Dr. Alvin HUI

Associate Consultant, Hong Kong Children's Hospital

Dr HUI graduated from the Chinese University of Hong Kong and received his specialist training of Paediatrics in the Queen Elizabeth Hospital of Hong Kong. He then worked as a research fellow in the Division of Nephrology of the Children's Hospital of Philadelphia, USA and the international visiting scholar in the Perelman School of Medicine, University of Pennsylvania. His interests include paediatric critical care nephrology, acute kidney injury and extracorporeal blood purification. He pioneered and introduced a number of new techniques of renal replacement therapy and extracorporeal blood purification to the Paediatric Intensive Care Unit of the Hong Kong Children's Hospital. He is the principal investigator of a few studies related to acute kidney injury and critical care nephrology, and has participated in international cohort study such as "Chronic Kidney Disease in Children (CKiD)" and "Worldwide Exploration of Renal Replacement Outcomes Collaborative in Kidney Disease (WE-ROCK)". In 2021, he obtained the "D.H. Chen Foundation Clinical Research Fellowship". He is now the Associate Consultant of the Hong Kong Children's Hospital and the Honorary Clinical Associate Professor of the Chinese University of Hong Kong.



Dr. Andy KWOK

Associate Consultant (PICU), Paediatrics Intensive Care Unit (PICU), Hong Kong Children's Hospital

Dr. KWOK is a dedicated Pediatrician with special interest in Paediatric intensive care and extracorporeal life support. With years of intensive training and experience, Dr. Kwok has participated in numerous international conferences, sharing insights and advancements in the field. Currently, Dr. Kwok is a team member of Paediatric Intensive Care Unit at Hong Kong Children's Hospital.

Speakers' Biographies



Dr. Matthew Hon Lam LEE

Associate Consultant, Department of Paediatrics & Adolescent Medicine, Queen Mary Hospital

Dr. Matthew Hon Lam LEE graduated from the University of Hong Kong in 2014. He worked in paediatric unit of Queen Mary Hospital since 2015. He joined paediatric nephrology team since 2018 and became a fellow in 2021.



Dr. Ho Ming LUK

Chief of Service (Clinical Genetics), Department of Clinical Genetics, Hong Kong Children's Hospital

Dr Ho-Ming Luk obtained his basic medical degree from the University of Hong Kong. He was trained in Paediatrics in Queen Mary Hospital and Genomic Medicine in Clinical Genetic Service, Department of Health Hong Kong and Guy's and St Thomas' Hospital UK, He is now working as Consultant in-charge at Clinical Genetics Service Unit of Hong Kong Children's Hospital, Hospital Authority. He is also the Clinical Lead in the Hong Kong Genome Project/Hong Kong Children's Hospital Partnering Center.

His main clinical activities and researches are the usage of cutting-edge technologies in diagnosis, management and prevention for prenatal, paediatric and adult genetic and genomic diseases. He has been published more than 100 articles in local, regional and international peer viewed journals

Speakers' Biographies



Prof. Stephen MARKS

Professor of Paediatric Nephrology and Transplantation, University College London Great Ormond Street Institute of Child Health
Director of NIHR GOSH Clinical Research Facility, Great Ormond Street Hospital London, UK

Professor Stephen MARKS, MD MSc MRCP DCH FRCPCH is Professor of Paediatric Nephrology and Transplantation at University College London Great Ormond Street Institute of Child Health. He is clinical lead for renal transplantation and Director of the National Institute for Health Research Great Ormond Street Hospital Clinical Research Facility at Great Ormond Street Hospital for Children NHS Foundation Trust. He has local, national and international roles including President of the British Association for Paediatric Nephrology and Chair of the Education Committee of the International Pediatric Transplant Association (IPTA) having also been an IPTA Councillor. His research continues to date in the fields of renal transplantation (including innovative drug trials concerning new anti-rejection therapies and assessment of children post-renal transplantation), systemic lupus erythematosus and vasculitis. He is on the editorial board for "Pediatric Nephrology" and "British Journal of Renal Medicine" and is associate editor for "Transplantation" and "Pediatric Transplantation", which are the journals of The Transplantation Society (TTS) and the International Pediatric Transplant Association (IPTA), respectively.



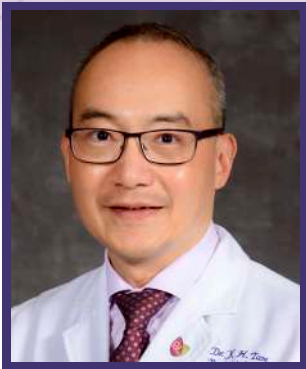
Prof. Qian SHEN

Professor of Paediatrics, Children's Hospital of Fudan University
Shanghai, China

Qian SHEN, MD, PhD, is Professor of Pediatrics, Children's Hospital of Fudan University, Shanghai, China. She is the Chief, Department of Nephrology, Children's Hospital of Fudan University, Shanghai, China; Deputy Director, Pediatric Nephrology Society of Chinese Medical Association; Director, Pediatric Nephrology Society of Shanghai Medical Association; Secretary, Pediatric Nephrology Committee of Chinese Medical Doctor Association; Secretary, Rare Disease Specialized Committee of Shanghai Medical Doctor Association.

Dr. Shen received her M.D in 1998 and PhD in 2010 at Shanghai Medical School of Fudan University. She went to National University Hospital, Singapore in 2004 (6-month training) and UCSD (3-month training) in 2010 as Visiting Scholar. Her research interests include dialysis and kidney transplantation for chronic kidney failure children, genetics and pathogenesis of congenital anomalies of kidney and urinary tract (CAKUT). Her Basic Researches on "CAKUT" are funded by three Chinese National Natural Science Funds. She was awarded "Shanghai "Rising Stars of Medical Talent" Youth Development Program- Outstanding Youth Medical Talents" in 2019 and "Eastern Talent Plan Leading Project" in 2023.

Speakers' Biographies



Dr. Peter TAM

Chief of Service, Department of Surgery, Hong Kong Children's Hospital
Consultant, Paediatric Surgeon, Prince of Wales Hospital

Dr. Peter TAM graduated from the Faculty of Medicine of the Chinese University of Hong Kong in 1993, and started his surgical training in Prince of Wales Hospital in 1994. He has been working as a paediatric surgeon since 1997. Dr. Tam is currently the Chief of Service of the Department of Surgery of Hong Kong Children's Hospital, as well as a consultant paediatric surgeon of Prince of Wales Hospital. Dr Tam has special interests in paediatric urology, paediatric minimally invasive and robotic surgery, and neonatal surgery. Dr. Tam has served the College of Surgeons of Hong Kong as the Chairman and Chief Examiner of the Paediatric Surgery Board from 2016-2022. Dr. Tam has published over 120 publications in peer-reviewed medical journals.



Dr. Karen Kin Nam WONG

Resident, Queen Elizabeth Hospital

Dr. Karen Kin Nam WONG joined the Department of Paediatrics, Queen Elizabeth Hospital after graduating from the University of Hong Kong. She attained membership of the Royal College of Paediatrics and Child Health in 2023 and is currently a higher trainee. She has special interests in critical nephrology care.



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Genetic Kidney Diseases, Prof. Qian SHEN

Genetic kidney diseases are a group of kidney disorders caused by genetic factors, and over 600 single-gene genetic disorders with renal and urologic phenotypes have been discovered globally. Genetic kidney diseases are common causes of chronic kidney disease (CKD) in children and adolescents. In addition, they drivers in the onset and progression of CKD in adulthood. Genetic kidney diseases are usually classified as six groups, such as steroid resistant nephrotic syndrome (SRNS), genetic renal tubular disease, congenital anomalies of the kidney and urinary tract (CAKUT), ciliopathy, chronic glomerulonephritis and nephrolithiasis. The identification of genetic kidney illnesses is primarily reliant on genetic testing. Our earlier data from the Chinese Children Genetic Kidney Disease Database (CCGKDD) revealed that the most common primary diseases leading to CKD in children are CAKUT, chronic glomerulonephritis, SRNS, and ciliopathy. A molecular genetic diagnosis was confirmed in 42.1% of the total patients, and in almost 40% of children with kidney failure. A diagnosis rate of 100% was observed in cases of nephrolithiasis, followed by ciliopathies (54.1%), SRNS (48.1%), chronic glomerular nephritis (29.4%), and CAKUT (23.8%). Constructing data sharing registration system for genetic kidney disease and forming representative data with Chinese population specificity, is of great significance for achieving phenotype and genotype characterization, improving precision management level and mechanism research. With the rapid advancement of medical research and technology, in-depth analysis of the impact of human gene structural variation and regulatory anomalies on gene function at the genomic level has become an attractive avenue for the identification of genetic kidney diseases. Focusing on different subtype disease cohorts, integrating and analyzing data such as genotype, multi-omics, and clinical outcomes, can achieve breakthroughs in the key points of disease diagnosis and treatment.

Nephrogenetics, Dr. Ho Ming LUK

Genetic renal diseases are a large group of inherited disorders with renal manifestations. They may inherited in Monogenic and oligogenic forms that are important cause of kidney disease in adults and children with prevalence emerging in recent years. Despite individual are rare, collectively that are not uncommon, Recognition of genetic renal disease is not only important for initiation of appropriate medical management, it also important for family cascade screening, surveillance and potential reproductive counselling. With the advancement of genetic and genomic technology, there are some breakthrough in diagnosis. In talk, the speaker will talk about the basic and update on genetic renal disease, genetic counselling and some case sharing.

Hypertension in Children, Prof. Stephen MARKS

This lecture will cover the importance of accurate blood pressure measurement and discuss the basic pathophysiology. The definitions of hypertension in children and young people as well as the causes and differences between childhood and adult-onset hypertension will be highlighted with emphasis that there is an epidemiological definition in adults based on risks of adverse events whereas statistical values are utilised in children with the 95th centile for age, sex and height centiles. There will be discussions of when to investigate hypertension and what the appropriate investigations for childhood hypertension should be noting that confirmation should be sought with 24 hour ambulatory blood pressure monitoring, where possible in older children. There is an increasing epidemic of obesity in developed countries and an increase in the diagnosis of childhood hypertension. The evaluation and monitoring of these patients differs depending on the resources available internationally. Clinicians should always remember that hypertension is a risk factor and not a disease and that the aetiopathogenesis of hypertension should always be considered (with fluid overload with salt and water retention needing to be excluded with consideration if renin-mediated). Once the aetiology has been confirmed then this will lead to more appropriate treatment for children and young people.

Fluid Status Assessment In Critically Ill Children, Dr. Ben GELBART

The assessment of fluid status is a fundamental component of the management of critically ill children. It includes the assessment of fluid balance charts and the clinical assessment of oedema. Fluid balance charts provide an estimation of the net difference between fluid input and output, however, rely on accurate documentation, provide no pathophysiological construct and do not account for changes in insensible water. Oedema, on the other hand, is a common clinical sign and indicates that fluid extravasation from the intravascular to the interstitial space has exceeded physiological clearance mechanisms. Despite progress in the understanding of the pathophysiology of oedema, its clinical measurement in children in intensive care is subjective. This is important because clinicians value the clinical finding of oedema in decision making regarding fluid management, yet objective measures do not exist.

In a recent prospective exploratory study of infants with congenital heart disease, simple and novel methods for quantifying oedema, including a clinical score, limb circumferences and 3D imaging, were investigated for their precision, inter-observer agreement, validity, and their associations with vital organ oedema and organ dysfunction.

This presentation will outline what is known regarding the clinical assessment of fluid balance in critically ill children and the findings of a study exploring methods for quantifying oedema.

Novel Extracorporeal Therapies In PICU, Dr. Alvin HUI

With advancements in technology and equipment, extracorporeal blood purification (EBP) has emerged as a promising adjunctive therapy for a variety of conditions among critically ill patients. EBP techniques have been applied to manage different conditions such as sepsis, rhabdomyolysis, liver failure and drug intoxication, all of which can lead to significant organ dysfunction, morbidity and even mortality. Notably the role of extracorporeal cytokine removal in conditions characterized by dysregulated inflammation and excessive cytokine production – such as sepsis, cytokine storm or acute respiratory distress syndrome (ARDS) – has attracted considerable attention in recent years. During the COVID-19 pandemic, several EBP devices were employed for such purpose.

Various EBP modalities, including high-volume haemofiltration, haemoabsorption, single-pass albumin dialysis, molecular adsorbent reticulating system, coupled plasma filtration adsorption, extracorporeal carbon dioxide removal or therapeutic plasma exchange, have been utilized to eliminate various substances across different indications. The setup can range from standalone circuits to sophisticated devices incorporated into existing continuous renal replacement therapy or extracorporeal membrane oxygenation systems. While most reported data on EBP application are from adults, there is limited data in paediatric populations. And there is a lack of consensus on when and how to employ EBP therapies in different indications. Besides, the technical difficulty of performing EBP therapy in small children remains a huge challenge. The talk will provide an overview of various EBP techniques and discuss some of the challenges of performing EBP, with a particular focus on paediatric populations, and will share local experiences and technical data.

Practical Elements Of CRRT, Dr. Ben GELBART

Continuous renal replacement therapy (CRRT) is an important component of the management of critically ill children. Common conditions that require CRRT include congenital heart disease, sepsis, inborn errors of metabolism and acute liver failure with both common and unique indications such as acute kidney injury/uraemia, acid/base disturbance, fluid accumulation or toxin removal. The Paediatric Intensive Care Unit at the Royal Children's Hospital (RCH) Melbourne is a 22 bed quaternary referral centre with dedicated cardiac and general units. This presentation will focus on the current practice of CRRT locally at the RCH and internationally, and some of the evidence and practical elements that underpin this practice. The organisational approach to CRRT, choice of modality and aspects such as fluid management, sepsis and inborn errors of metabolism will be discussed. In addition, the approach to regional anticoagulation focusing on citrate will be discussed.

Plenary Lecture

Unique Considerations In Managing Paediatric Lupus Nephritis, Prof. Stephen MARKS

Childhood-onset systemic lupus erythematosus (SLE) has similar features to adult-onset disease although children present with a different spectrum of disease with increased incidence and severity of kidney involvement with lupus nephritis. There are variable clinical manifestations and an unpredictable natural history of childhood-onset SLE. However, there is a progressive clinical course of SLE with significant morbidity and mortality rates. Renal disease is a major determinant of the long-term outcomes of SLE and influences the management with immunosuppressive agents. The clinicopathological correlation of lupus nephritis will be considered with view that induction and maintenance management will be targeted according to those presenting with multi-system involvement and the degree of renal involvement. The histopathological classification is now modelled on the International Society of Nephrology (ISN) / Renal Pathology Society (RPS) Classification with ISN / RPS Class I and II lupus nephritis showing evidence of minimal mesangial and mesangial proliferative LN, respectively, ISN / RPS Class III and IV lupus nephritis showing evidence of focal and diffuse lupus nephritis, respectively (with evidence of active and/or chronic lesions) with or without ISN / RPS Class V membranous lupus nephritis changes. Children rarely present with ISN / RPS Class VI lupus nephritis with advanced sclerotic lupus nephritis requiring kidney replacement therapy. Children and young people should receive the optimal induction and maintenance immunosuppressive regimens and should be included in clinical trials, where possible.

Overview Of Chronic Kidney Disease And Measures For Slowing Disease Progression, Prof. Qian SHEN

Chronic kidney disease (CKD) is a significant global public health issue characterized by high prevalence, low awareness, and substantial disease burden. Strengthening the prevention and control of CKD and promoting disease management is urgent. CKD in children exhibits distinct features compared to adult cases, which requires special attention. CKD in children can not only affect children's immediate health but also have lasting implications for their quality of life in adulthood. This lecture aims to integrate the latest KDIGO 2024 CKD management guidelines with contemporary research on the diagnosis and treatment of pediatric chronic kidney disease to showcase the current progress in this field.

The presentation will be two parts. The first part includes a comprehensive overview of CKD in children, covering its definition, classification, epidemiology, etiology, and the common mechanisms underlying disease progression. Understanding these aspects is crucial for enhancing awareness of CKD in children. The second part will adopt a full disease course and life course perspective, discussing several key strategies for slowing the progression of CKD in children: early screening, treatment of underlying diseases, intervention targeting common pathophysiological mechanisms, management of complications (hypertension, anemia, electrolyte imbalances, malnutrition, growth failure, etc), and assessment for pre-transplantation. By highlighting these strategies, this lecture aims to enhance understanding of the management of CKD in children, ultimately contributing to improved outcomes for affected children.

Thrombotic Microangiopathy In Children – An Overview, Dr. Alison Lap-tak MA

Atypical haemolytic uraemic (aHUS) is an uncommon and severe form of thrombotic microangiopathy (TMA). It is characterized by thrombocytopenia, acute kidney injury and microangiopathic haemolytic anaemia. TMA is caused by a spectrum of diagnosis, and the nomenclature of the disease is evolving. Complement dysfunction plays an important role in the pathogenesis of aHUS. Complement genetic mutation has been reported in up to 60% of the patients with aHUS. The dysregulation of the alternative complement pathway results in endothelial dysfunction and subsequent organ injury. About 10% of the patients (some countries report a higher incidence up to 56%) have developed auto-antibodies against complement factor H, which is one of the key regulator of the complement system. On the other hand, aHUS could be a result of hereditary mutations independent of complement system, such as mutations in DGKE. Secondary HUS refers to the group of patients who suffer from TMA phenotype but without genetic predisposition of complement dysregulation. Diagnosis of aHUS would require laboratory with genetic and immunology expertise. Treatment of aHUS would depend on the cause of the disease. Historically, plasma exchange or therapy has long been the mainstay of treatment for aHUS, and yet patients suffer from high incidence of kidney failure and mortality. Even after kidney transplant, high rates of disease recurrence leading to graft failure were reported. While the development of complement inhibitors over the past decade has improved the outcomes of patients with aHUS dramatically, the cost of the treatment remains to be high with limited availability in low-resource countries. The optimal dose and duration of the anti-complement therapy remains to be determined. A global effort in clinical research would hopefully address the unanswered questions and resolve controversies in aHUS

Acute Nephritic Syndrome And Rapidly Progressive Glomerulonephritis (RPGN), Prof. Stephen MARKS

Children can present with clinical nephritic and/or nephrotic syndrome as part of a glomerulonephritis with varying degrees of haematuria, proteinuria, oedema and renal dysfunction. Rapidly progressive glomerulonephritis (RPGN) is a syndrome of the kidney that is characterised by features of glomerulonephritis with a rapid loss of renal function. Percutaneous renal biopsies of children with RPGN commonly reveals evidence of crescentic glomerulonephritis. Prompt treatment is required to reverse the active lesions and increase the chances of children having reversible acute kidney injury and prevent chronic damage and the development of chronic kidney disease. The aim is to reduce children and young people developing end-stage kidney disease, requiring dialysis and transplantation. Special consideration for common causes of RPGN will be considered with anti-GBM antibody disease (previously called Goodpasture syndrome) and ANCA (anti-neutrophil cytoplasmic antibodies) associated vasculitis. ANCA-associated vasculitides, include granulomatosis with polyangiitis (GPA; previously called Wegener's granulomatosis), microscopic polyangiitis (MPA), renal limited vasculitis and eosinophilic granulomatosis with polyangiitis (previously called Churg-Strauss syndrome). The lecture will highlight the discussions on treatments of RPGN with crescentic glomerulonephritis commencing with pulses of intravenous methylprednisolone followed by induction and maintenance immunosuppressive regimens and the consideration of plasmapheresis for children and young people. The international community has a duty to ensure that children and young people with RPGN should be considered for clinical trials of newer immunosuppressive agents for the future.

Plenary Lecture

Learning From PICU Mortality And Morbidity Auditing For Future Improvement, Prof. Trevor DUKE

Morbidity and mortality auditing is a central part of clinical paediatrics. This talk describes the principles of successful audit, including the environment and approach in which audit is conducted, how audit can be a central part of quality improvement if linked to group problem-solving and feasible actions. I describe how audit fulfils an important educational role in paediatric intensive care or any clinical department, how it can assist team morale if done properly, and how child mortality auditing at a jurisdictional level can have a vital role in improving public child health. I give some examples of Lessons Learned from the PICU M&M at the Royal Children's Hospital in Melbourne, and from other countries.

Resuscitation In The Emergency Department: The Role Of A Paediatric Emergency Physician, Dr. Shu Ling CHONG

The frontline Paediatric Emergency Physician has the challenge of identifying an acutely unwell child among hundreds of children presenting to the Emergency Department (ED) daily. Hidden in the need for early recognition and risk stratification, is the conundrum of children with varying ages presenting with undifferentiated complaints. What aids do we have and what are the pearls and pitfalls of using some of these tools? How do paediatric early warning scores (PEWS) perform in the ED and how should they work as adjuncts to help the ED physician? In this talk, we will discuss paediatric-unique aspects of initial resuscitation and how the 'golden hour' can be optimised. ED shock resuscitation predominantly focuses on stabilizing the macro-circulation. Fluid resuscitation needs to be balanced based on the following factors: likely cause of shock, presence of organ dysfunction, severity of illness and co-morbidities. What are the implications of the underlying disease, patient's physiological response, and ED interventions on vascular dysfunction, microvascular leak, and subsequent course? For paediatric cardiac arrest, we will look into the cardiopulmonary resuscitation literature to understand the evidence for effective initial management that result in neurologically favourable survival. For paediatric trauma, we will study what roles the ED physician have in identifying potential injuries, initial stabilisation and early involvement of relevant subspecialties for good clinical outcomes. We will investigate our role, as well as how we can best partner our colleagues in the pre-hospital and critical care arenas in the continuum of patient-centric resuscitation and acute care.

Paediatric ECMO In Distributive Shock – Experience In HK, Dr. Robin CHEN, Dr. Andy KWOK

In this talk, we will focus on the use of Extracorporeal Membrane Oxygenation (ECMO) in pediatric patients with refractory distributive shock. Distributive shock in children, such as those with severe sepsis or acute poisoning, can quickly escalate to a life-threatening condition. In these critical situations, timely use of ECMO support can provide a bridge to recovery by supporting patient's cardiorespiratory function while the underlying causes are addressed.

We will present real-life cases from our clinical experience in Hong Kong, where ECMO was used to manage pediatric patients with refractory distributive shock. Through these cases, we aim to highlight key factors in patient selection, the importance of timely ECMO initiation, and the unique challenges of ECMO circuit management in this specific population. Additionally, we will discuss the complications that can arise during ECMO support and explore the outcomes we have observed. Finally, we will review the current evidence and guidelines related to the use of ECMO in this patient group.

This session will offer valuable insights for healthcare providers involved in the care of critically ill children, particularly those managing complex cases of distributive shock. By sharing our experiences, we hope to provide a deeper understanding of both the challenges and the benefits of using ECMO in pediatric intensive care.

Nephrotic Syndrome: What'S New In 2024, Dr. Eugene CHAN

Childhood idiopathic nephrotic syndrome is one of the most common glomerular disease in childhood. The condition is associated with significant morbidities and significantly impact on the children's quality of life. There have been recent advances in the management of nephrotic syndrome from initial treatment strategy to the use of several biologics that target various pathways involving the B-cells. Furthermore, the current classification of childhood idiopathic nephrotic syndrome is clinical, and is defined according to treatment responses to corticosteroids and other immunosuppressive agents. The classification according to kidney histology is limited by significant overlap in clinical behavior and prognosis. Consequently, children with nephrotic syndrome are treated with standardized, yet non-specific, protocols.

The aim of this talk is to summarize the contemporary understanding of the pathogenesis and disease management in idiopathic nephrotic syndrome. The presenter shall discuss several major breakthroughs uncovered through mutli-omic investigations and multi-centre collaborative efforts, including the pathogenic role of B cell immunology, the identification of anti-nephrin autoantibodies and emerging results from clinical trials. Reclassifying and treating the disease according to underlying mechanistic pathways will enable precision medicine and identify novel therapeutic approaches that can enhance patient outcomes and restore near-normal childhood.

Congenital Hydronephrosis and Upper Urinary Tract Obstruction, Dr. Peter TAM

Hydronephrosis, as defined by dilatation of pelvi-calyceal system of kidney, is one of the most common anomalies detected prenatally, and it may or may not be associated with hydroureter. Although upper urinary tract obstruction is a major concern and it commonly presents with hydronephrosis, the detection of hydronephrosis itself does not necessarily indicate obstruction and intervention. On the contrary, majority of prenatally detected hydronephrosis resolve or remain stable after birth, and can be safely monitored without any specific treatment. Diagnosis of true obstruction with potential threat to the upper urinary tract function may not be straightforward, and is always an individualized process of evaluating both the clinical presentations and radiological findings of patients.

With the increasing popularity of antenatal ultrasound, most of the upper urinary tract obstruction in children are detected prenatally. Children may need to undergo surgery before they develop any symptoms. It sometimes can be challenging to reach a diagnosis of upper urinary tract obstruction timely when functional loss can be prevented, but at the same time to avoid a premature conclusion which may end up with doing unnecessary surgery. Radiological investigations for upper tract obstruction commonly include ultrasound examination and radioisotope scan. MR Urography is occasionally required for atypical or complex anatomy. Micturating cystourethrogram(MCUG) or voiding urosonography(VUS) are commonly performed to exclude vesico-ureteral reflux. Among the patients who eventually undergo surgery, most have had repeated radiological investigations before a conclusion can be made. The interval progression in repeated imaging is most helpful in confirming the presence of clinically relevant obstruction that requires intervention to preserve renal function.

Vast majority of upper urinary tract obstruction requiring surgery in paediatric age group are congenital in nature. The most common condition affecting children is pelvi-ureteric junction(PUJ) obstruction. Less common pathologies include renal duplex with obstructed upper moiety, primary obstructive megaureter and congenital mid-ureteric stricture. Scientific evidence has established minimally invasive surgery as a safe and effective alternative to open surgery in correcting upper urinary tract obstruction, with the benefits of shorter hospital stay and less postoperative analgesic requirement. With the advancement in technology, robot-assisted laparoscopic(RAL) approach has been widely adopted in children. Like in many parts of the world, RAL is currently our standard approach for performing various kinds of reconstructive surgery in treating upper urinary tract obstruction in children.

Session E - Difficult Nephrology Cases For Discussion

UTI And Enuresis: Updates On Management, Prof. Qian SHEN

The content of this presentation is focused on the advancements in the management of urinary tract infections (UTIs) and nocturnal enuresis, which will be elaborated in two parts.

The first part provides an introduction of urinary tract infections. As one of the most prevalent infections in childhood, UTI is an infection that can occur in any part of the urinary system, including the kidneys, ureters, bladder, and urethra. UTIs can be classified based on clinical symptoms, location, and severity. Additionally, UTIs are categorized into uncomplicated UTIs and complicated UTIs. The pathogenesis of UTIs is associated with routes of infection, host factors, and pathogenic bacteria. Diagnosing UTI requires a comprehensive assessment that combines clinical manifestations, laboratory tests, and imaging studies. The most critical treatment for UTI is the use of antibiotics. The choice of antibiotics is based on local antimicrobial sensitivity patterns and aims to minimize the emergence of drug-resistant bacteria.

The second part is the management of nocturnal enuresis (NE). NE is an extremely common condition, which, although somatically benign, poses long-term psychosocial risks if untreated. The most important comorbid conditions to take into account are psychiatric disorders, constipation, urinary tract infections and snoring or sleep apneas. Differentiating enuresis using questionnaires and voiding diaries into non-(NMNE) and monosymptomatic enuresis (MNE) is crucial at intake to decide the most appropriate workout and treatment. Usually, active therapy is recommended from the age of 6 years. Urotherapy is a specialized practice, which has become mainstay therapy not only for daytime urinary incontinence, but also for nocturnal enuresis, functional constipation and fecal incontinence. In monosymptomatic enuresis, or if the above strategy did not make the child dry, the first-line treatment modalities are desmopressin or the enuresis alarm. If both these therapies fail alone or in combination, anticholinergic treatment is a possible next step.

Session F - Difficult Nephrology Cases For Discussion

Dr. Matthew Hon Lam LEE

A six-year-old boy presented with rapidly progressive glomerulonephritis, unexpectedly found a genetic mutation on BLK gene (X-link agammaglobulinemia), likely pathogenic variant. This case presentation will explore the underlying mechanism and review literature on case reports.

Dr. Karen Kin Nam WONG

A girl with sky high blood pressure

Renovascular hypertension is a rare but important etiology of secondary hypertension in children. It accounts for 5-25% of hypertension in children. Amongst the Asian and African populations, Takayasu arteritis is the leading cause of renovascular hypertension contrary to Western populations wherein fibromuscular dysplasia is more common. Fibromuscular dysplasia is a non-inflammatory and non-atherosclerotic disease affecting the vascular wall. It commonly affects medium-sized arteries particularly the renal, carotid and vertebral arteries. It leads to arterial stenosis, aneurysm, dissection and tortuosity. Up to now, the etiology remains unknown and there is no cure.

This is a case presentation of a girl who had hypertensive emergency crisis first presenting in infancy caused by renal artery stenosis. She was first diagnosed to have malignant hypertension during infancy. Further investigation showed that the hypertension was due to right renal artery stenosis caused by fibromuscular dysplasia with a non-functional right kidney. She required multiple antihypertensive medications and balloon dilatation of the right renal artery. Despite all these measures, her hypertension control remained refractory. She subsequently underwent unilateral nephrectomy. In addition, she suffered from stenosis of the right cerebral artery. Unfortunately, her disease progressed to involve left renal artery one year later and the story recurred. She had another episode of hypertensive crisis few years later complicated with intraventricular hemorrhage and led to severe neurological impairment.

This case will illustrate the difficulty in managing malignant hypertension, the clinical outcomes and treatment of fibromuscular dysplasia. It also demonstrates the dilemma for usage of angiotensin- converting enzyme inhibitors (ACEI) in single functional kidney.

Dr. Bestain Ka Nam AU

Potassium disturbances are commonly seen in daily practice. Apart from common causes, endocrine and tubular diseases are the important differential diagnosis. In this presentation, a baby born premature had transient hyperkalaemia and then hypokalaemia. Classical history could actually narrow down the differential diagnosis to a subtype of a specific disease without a genetic test. The diagnostic approach, basic physiology and pathophysiology will be briefly explained (in an easy-to-understand way). The specific treatments and important take-home messages in treatment of a tubular disease will also be discussed!

Sponsored talk

Integrating Pulmonary And Acute Care With The Impact Of Nusinersen On Respiratory Function In Pediatric Spinal Muscular Atrophy, Dr. Leanne GAULD

Plenary Lecture

Fluid Bolus Therapy In Paediatric Sepsis: How Much Fluids Is Too Much?, Dr. Ben GELBART

Fluid bolus therapy is the mainstay of initial resuscitation of children with sepsis. International sepsis guidelines have continued to recommend it as first line therapy prior to the administration of vasoactive therapies. In the past 15 years, scrutiny has been applied to the use of fluid bolus therapy in the recognition that its supporting evidence base is weak and a greater recognition of the complications of resultant fluid accumulation.

The pathophysiology of sepsis is a complex multifaceted process initiated by host and pathogen related factors. It leads to dysregulation of inflammation, coagulation, metabolic and microvascular pathways. The cardiovascular clinical manifestations include abnormal vascular tone and permeability, cardiac dysfunction and fluid loss which have overlapping clinical signs. Despite, major advances in the understanding of the pathophysiology of sepsis, clinicians are still faced with determining the need for fluid bolus therapy, its volume or frequency, and its response, based on the assessment of common clinical signs. In the intensive care setting more detailed assessment is available.

This presentation will review the current international guidelines, the pathophysiology of sepsis and what we know about the practice of fluid bolus therapy. It will review recent studies regarding fluid bolus therapy and the assessment of fluid responsiveness and ultimately answer the question "how much fluid is too much?".

Early Identification Of Bacterial Sepsis, Dr. Shu Ling CHONG

Sepsis is characterised by a dysregulated host response to infection and organ dysfunction, and results in more than 3 million deaths annually among children and adolescents, globally. Paediatric sepsis and sepsis-related concerns account for a large proportion of resource utilisation worldwide, and is a costly disease. Besides the impact on the child in the acute phase, paediatric sepsis also results in a life course of new or worsening comorbidities, reduced function, and long-term dependence on the family and society.

Paediatric sepsis has been identified as the failure of a health system, since multiple systemic barriers impede prevention, effective diagnosis, treatment and follow-up of affected children. Delayed recognition has been identified as a key barrier in advancing sepsis care. The early identification of a child with sepsis is crucial to institute early measures including life- and organ-saving interventions, to reduce mortality, and among survivors, avoid prolonged hospitalisation and poor functional outcomes.

Early differentiation based only on clinical phenotype is known to be inaccurate, and current early tools include the use of vital signs and biomarkers. We will discuss the literature on early identification of serious bacterial infections and bacterial sepsis, with a special focus on the < 3-month vulnerable population.

Defining Paediatric Sepsis, Dr. Anna LIN

Sepsis is a major cause of childhood morbidity and mortality and constitutes 8% of all PICU admissions. Despite the significant global burden, for decades, a clinically satisfactory definition of paediatric sepsis has been elusive. Paediatricians worldwide have relied on expert consensus sepsis definitions established in 2005 which defined paediatric sepsis as a systemic inflammatory response syndrome (SIRS) in response to infection. However, these criteria have been minimally validated, with emerging data indicating a lack of specificity in identifying those at higher risk of mortality. In response, the paediatric sepsis research community took action - in January 2024 the Phoenix Sepsis Score was established after an extensive, three-pronged data-driven global research effort. This session will offer a review of the new Phoenix Sepsis Score consensus criteria for identifying sepsis and septic shock, and the evidence behind it.

Surgical Management Of Head Trauma 123, Dr. Emily CHAN

In this talk, the speaker would highlight the surgical aspect of management of traumatic brain injury. It would cover the workflow of management of patients with traumatic brain injury as well as some specific types of condition in trauma and their management."

Monitoring In Neuro-Critical Care: Modalities, Indications And Practicality, Dr. Steve SZE

Neuro-critical care has emerged as one of the most rapid growing subspecialties in paediatric intensive care field. It started in 1980s to 1990s combining the expertise from intensivists, neurologists, surgeons, radiologists and many allied health teams. Modern neuro-critical care composes of neuro-resuscitation, neuro-imaging, intracranial pressure management, seizure detection, multi-modal neuro-monitoring, prognostication, and rehabilitation after insults to the fragile nervous system. EEG, quantitative EEG, NIRS, brain tissue oximetry, transcranial doppler ultrasound, optical nerve sheath measurement and plasma brain injury markers have been put into practical use with variable clinical impacts. Intracranial pressure goal directed management has been carried out for decades and now, the advance in medical technology has allowed the possibility of cerebral perfusion pressure directed management and the use of optimal CPP.

In past 30 years, with revolutions on management of different neuro-critical conditions including trauma, stroke, malignant CNS infection, neurometabolic disorders and seizure disorders, children get admitted to specialised neuro-critical ICUs have better survival and functional outcome.

New neuro-critical ICUs are going to be established in Hong Kong, The Chinese Mainland and worldwide in coming years. Mastering POCUS skill for neurology assessment and knowledge over multi-modal neuro-monitoring will be fundamental requirements to all modern paediatric intensivists.

Paediatric Traumatic Brain Injury: Patterns Observed From PACCMAN Studies, Dr. Shu Ling CHONG

Traumatic Brain Injury (TBI) in children is an urgent public health priority and has far-reaching consequences. Besides being an important cause of death globally, affected children face lifelong consequences of lost opportunities, cognitive and behavioural deficits, and in severe cases, long-term reliance on caregivers and ever-increasing financial costs. A systematic review and meta-analysis by our group showed a dose-dependent relationship between TBI severity and neurocognitive outcomes, evident in executive function, learning and memory. Cognitive deficits were present in all severities of TBI but persisted among those with severe TBI.

The TBI initiative by the **Pediatric Acute & Critical Care Medicine Asian Network (PACCMAN)** sought to study paediatric TBI epidemiology in Asia. We found that poor functional outcomes (measured using the Pediatric Cerebral Performance Category {PCPC} scale) were prevalent after moderate-severe TBI in Asian children, with 32% of survivors having moderate disability, severe disability, or in vegetative state. We also investigated specific risk factors for poor outcomes and reported our findings. Early coagulopathy in moderate-severe TBI was more likely to be present with young age and in the presence of multiple trauma, and was independently associated with mortality and poor functional outcomes. We also studied early metabolic derangements in TBI and how these factors were prognostic of clinical outcomes.

PACCMAN TBI was joined by Pediatric Collaborative Latin American Network (LARed) in 2021. This collaboration across 2 continents allowed us to study children with TBI in both critical care networks. We demonstrated variation in implementation of current TBI management guidelines in designated trauma centres and non-trauma centres in both Asia and Latin America. Children with TBI in lower middle-income countries (LMICs) were more critically injured, with higher risk for poor functional outcomes, prolonged hospital stay and increased healthcare utilisation. We studied high risk groups including those with child abuse. We investigated the role and effectiveness of the intracranial pressure (ICP) monitor and established the association between dysnatraemia and clinical outcomes.

In this talk, we will discuss the findings of the PACCMAN TBI group, barriers faced in cross-national multi-centre collaborations, and the unmet needs for future research in paediatric TBI.

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