



8th Edition of
Euro-Global Conference on
**Pediatrics and
Neonatology**

SEPTEMBER 28-30, 2026 | LONDON, UK

**“Better Care for Every Child:
Practice That Delivers”**

IN-PERSON:

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Ditton Rd, Langley, Slough SL3 8PT,
United Kingdom

VIRTUAL:

BRITISH SUMMER TIME (BST)

8TH EDITION OF

EURO-GLOBAL CONFERENCE ON

PEDIATRICS AND NEONATOLOGY

HYBRID EVENT

28-30
SEPTEMBER 2026

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Keynote Speakers

Keynote Speakers



Ali Al Kaissi

Ilizarov Institute Traumatology and
Orthopedics, Russia



David J R Hutchon

Darlington Memorial Hospital,
United Kingdom



Deepak Sharan

RECOUP Health, India



Gabriella Di Rosa

University of Messina, Italy



Hanna A Alonim

The Mifne Center and Bar-Ilan University,
Israel



Hedy Cleaver

University of London, United Kingdom

Keynote Speakers



Ine Achten

PXL University College, Belgium



**Marlene Fabiola
Escobedo Monge**

University of Valladolid, Spain



Renee J Dufault

Food Ingredient and Health Research
Institute, United States



Sergey Suchkov

N. D. Zelinskii Institute for Organic Chemistry
of the Russian Academy of Sciences, Russia



Steven M Donn

University of Michigan Health, United States



Zhenhuan Liu

University of Chinese Medicine, China



Welcome Message

Ali Al Kaissi MD, MSc, Dsc (Hon)

Ilizarov Institute Traumatology and Orthopedics, Russia

It is my pleasure to welcome you to this annual scientific meeting of the 8th Edition of Euro-Global Conference on Pediatrics and Neonatology, during September 28-30, 2026, London, UK. My lecture entitled The terms rare or orphan disease: The diagnostic bias toward severe phenotypes. Rare or Orphan diseases are commonly used in different medical disciplines. Rare disease is only applied to the severe recognizable syndrome (which in fact is rare), but the mild and moderate types are so frequent. Rare disease manifests itself mostly soon after birth. But the mild and moderate showed up the abnormalities later in life (post-adulthood). Physicians frequently use the term rare, or idiopathic because these are the easiest terms to apply. The mild and the moderate types of genetic disorders are the real clinical challenges in medical practices. Genetic disorders in the fetus can be understood as aberrations of the sequence of normal growth and developmental processes and are encompassed within a specific genetic program and can lead to diverse forms of disorders. This genetic aberration in the severely affected foetus must be fully understood and consequently well connected to other skeletal or extraskeletal abnormalities in other family subjects. In this presentation a multigenerational family study showed the necessity to connect single clinical disorder of children/adults with complex clinical presentation in one severely affected child/adult. Although the unusual clinical phenotype of these children were evident at birth. Thereby comprehensive clinical and radiological phenotypic characterization are the base line tools required to fulfil the diagnostic process. We stress that the genotype can rarely explain the extent of skeletal malformation complex and or the natural history of the disease.

Welcome Message



David J R Hutchon

Darlington Memorial Hospital, United Kingdom

Welcome to EPN 2026 in London. Keeping up to date in a rapidly changing field of practice which will be a valuable opportunity to update your knowledge and practice in neonatology. The 2025 Neonatal Resuscitation guidelines recognise the importance of providing care of the newborn during the first few minutes after birth without clamping the umbilical cord and my presentation will summarise the evidence and provide practical ways to meet this requirement. I am excited by the rest of the program.



Welcome Message

Deepak Sharan

RECOUP Health, India

I am happy to speak on Limbic System Rehabilitation for Childhood Developmental Disabilities at the 8th Euro-Global Conference on Pediatrics and Neonatology, September 28-30, 2026. The limbic system, crucial for emotions, memory, motivation, circadian rhythms, and behavior, is often affected in childhood developmental disabilities like ADHD, autism, and mood disorders, making children vulnerable to emotional dysregulation, learning difficulties, and social challenges due to disruptions in brain development and plasticity. Limbic System Rehabilitation is a way of retraining the brain's alarm system. The goal is to create new, healthy brain patterns that replace the old, hyper-sensitive ones. Key interventions and tools include Trauma-informed therapies, such as Somatic Eye Movement Desensitization and Reprocessing, Emotional Freedom Techniques, or Internal Family Systems; Neurofeedback; Cognitive Behavioral Therapy; Neurosomatic Therapy; heart rate variability-based coherence training; Physical therapy; Brain Stimulation; Mindfulness, Meditation, and Positive Psychology; Vagus Nerve Stimulation; and Lifestyle adjustments.

Welcome Message



Gabriella Di Rosa, MD, PhD

Full Professor of Child Neuropsychiatry, University of
Messina, Messina, Italy

It is a great pleasure to welcome you to the Pediatrics and Neonatology sessions of EPN 2026, an Euro-Global Conference that brings together clinicians and researchers dedicated to improving early-life health and developmental outcomes. The neonatal and infant period represents a critical window in which biological, medical, and environmental factors interact to shape growth and development. Within this context, careful clinical assessment and interdisciplinary collaboration are essential to ensure accurate interpretation of early signs and to guide appropriate follow-up and intervention. Sharing experiences across pediatrics, neonatology, and related specialties allows us to refine clinical reasoning and better understand the complexity of early developmental trajectories. This conference offers an important opportunity for scientific exchange, discussion, and collaboration. I warmly welcome all participants and wish you a productive and inspiring meeting.

Welcome Message



Hanna A Alonim

The Mifne Center and Bar-Ilan University, Israel

Dear Colleagues,

For several years now, I have been participating in EPN conferences. These conferences are organized in a professional, welcoming, and fair manner-unlike some other organizations to which I am invited. I am pleased to once again contribute my knowledge and long experience in the field of autism in infancy, from a mental health perspective, to the conference that will take place in London in September 2026. I warmly invite you as well to take part in this conference, which offers a rich variety of topics in a field where meaningful and fruitful international collaborations have already been established.



Welcome Message

Marlene F. Escobedo-Monge, M.D - Researcher

Department of Pediatrics, Faculty of Medicine , University of
Valladolid, Spain

Dear Conference Attendees,

It is an immense pleasure and honor that we extend a cordial welcome to the 8th Euro-Global Conference on Pediatrics and Neonatology 2026, held under the theme 'Better Care for Every Child: Practice that Delivers Results.' In the contemporary era of precision and personalized medicine, this conference seeks to reinforce a multidisciplinary framework that integrates basic science, clinical practice, and public health research to advance pediatric and neonatal care. Within this context, the meeting provides a valuable platform for knowledge exchange, professional experience, and collective vision, all aimed at improving outcomes and shaping the future of pediatric and neonatal healthcare. The scientific program encompasses a broad spectrum of topics across pediatrics and neonatology, including primary care, emergency medicine, pulmonology, endocrinology, oncology and hematology, nephrology, nutrition, and translational and clinical research.



Welcome Message

Renee J. Dufault, PhD

Executive Director and Principal Investigator, Food Ingredient and Health Research Institute, Hawai'i, United States

It is a pleasure to welcome you to this important scientific event entitled, *Better Care for Every Child: Practice That Delivers*. It will take place from September 28-30, 2026, in London, UK and Virtually. This is the 8th year of the Euro-Global Conference on Pediatrics and Neonatology (EPN 2026). I had the pleasure of attending the 5th year conference in person and was delighted with the engaging conversations and presentations among the attendees and leading experts and practitioners in the neonatal and pediatric fields. As scientists and practitioners we are in unique positions to share our knowledge of the steps we can take to improve child health and learning outcomes. This conference promises not to disappoint. I encourage attendance and welcome all of you to come and share your expertise and the advances being made to improve maternal and child health outcomes.



Welcome Message

Dr Sergey Suchkov

N. D. Zelinskii Institute for Organic Chemistry of the Russian Academy of Sciences, Russia

Dear Colleagues, Scientists and Friends

On behalf of the Organizing Committee, we would like to extend a warm welcome to all the distinguished speakers and participants of the 8th Edition of Euro-Global Conference on Pediatrics and Neonatology (EPN 2026), which is to be held during September 28-30, 2026, in London, UK, being a Tapestry of Historical Architectural Brilliance, Urban Innovation and Grand Beauty in the Globe.

This prestigious Global Event will bring together leading pediatricians and neonatologists, famous experts and researchers, biodesigners and bioengineers, clinical innovators and healthcare professionals to share cutting-edge advancements, biodesign-driven unique diagnostic tools and innovative treatments, and the latest advancements in Personalized and Precision Medicine (PPM)-guided pediatric and neonatal services, from around the world to share the latest breakthroughs, evidence-based practices, and transformative approaches in pediatric and neonatal care. The next-generation pediatricians are starting up to play a unique role in developing and implementing molecular profiling tests in practice and communicate the results and their relevance with clinicians, enabling personalized care from preconception through the postnatal period and enriching knowledge concerning the applicability of PPM in different pediatrics fields, such as newborn screening, neonatal nutrition, renal injury, hemodynamic assessment, lung pathology, epilepsy, neonatal pharmacology, and others. As our knowledge of the role of PPM-guided services in determining drug efficacy and safety has expanded, these insights have provided new opportunities to apply principles of PPM to the care of infants, children and youth. Those experts are becoming the final certifier of a complex diagnostic process and the core experts in implementing OMICS-driven tests and bioinformatics support in pediatrics practice.

The Conference will explore a wide range of topics critical to the health and development of young babies and newborns, including neonatal intensive care, chronic disorders, neonatal personalized nutrition and precision foodomics, infectious diseases, and ethical considerations in pediatrics practice.

Building on the success of preceding meetings of the same generation, the Conference will feature a highly interactive, stimulating and multidisciplinary Program including high-impact keynote lectures and speeches, workshops, interactive plenary sessions and panel discussions, and providing an ideal Forum to stimulate ideas and establish collaborations. Extended networking opportunities will foster communications between delegates.

The core of the Event is its Scientific and Teaching Program as well. Graduate students, postdoctoral fellows, or other early-stage scientists and senior staff can take advantage of this opportunity to accelerate their knowledge immersion towards becoming an expert in this exciting fields of PPM-guided pediatric practice and discuss some of the latest trends in those fields through close interaction with the established leaders. We do hope that your interaction with your colleagues from many different countries will stimulate a creative exchange of ideas and will be personally rewarding.

Warmest and productive wishes and hope to meet and to see you soon in London!

We look forward to welcoming you to the Event to taste a smell of the deeply rooted pediatrics and neonatology, practice and culture, and to enjoy the interaction with your colleagues from different countries whilst stimulating a creative exchange of ideas!



Welcome Message

Steven M. Donn, MD, FAAP, FAARC

University of Michigan Health, United States

Dear Conference Attendees,

It is both a pleasure and an honor and to welcome you to this prestigious conference with many esteemed and notable speakers. I am sure that the presentations you hear will be both informational and educational and will hopefully stimulate you to consider conducting your own research into areas that are either controversial or unresolved. Thank you for attending and devoting your attention, and I would especially like to thank the faculty for giving its time, expertise, and enthusiasm to what I am certain will be a successful conference.



Welcome Message

Zhenhuan Liu

University of Chinese Medicine, China

Dear fellow friends

I am Professor Liu Zhenhuan from the Children's Neurological Rehabilitation Center of Women and Children's Hospital Affiliated to Guangzhou University of Chinese Medicine. I wish to congratulate the 8th European - Global Pediatric and Neonatal Medicine Conference (EPN 2026). Welcome friends to attend this 8th European - Global Pediatric and Neonatal Medicine Conference will show you the latest international clinical research results.

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About Magnus Group



Magnus Group, a distinguished scientific event organizer, has been at the forefront of fostering knowledge exchange and collaboration since its inception in 2015. With a steadfast commitment to the ethos of Share, receive, grow, Magnus Group has successfully organized over 200 conferences spanning diverse fields, including Healthcare, Medical, Pharmaceuticals, Chemistry, Nursing, Agriculture, and Plant Sciences.

The core philosophy of Magnus Group revolves around creating dynamic platforms that facilitate the exchange of cutting-edge research, insights, and innovations within the global scientific community. By bringing together experts, scholars, and professionals from various disciplines, Magnus Group cultivates an environment conducive to intellectual discourse, networking, and interdisciplinary collaboration.

Magnus Group's unwavering dedication to organizing impactful scientific events has positioned it as a key player in the global scientific community. By adhering to the motto of Share, receive, grow, Magnus Group continues to contribute significantly to the advancement of knowledge and the development of innovative solutions in various scientific domains

About EPN 2026



The **8th Edition of the Euro-Global Conference on Pediatrics and Neonatology (EPN 2026)**, scheduled for **September 28-30, 2026**, in **London, UK, and virtually**, serves as an international platform for professionals committed to advancing pediatric and neonatal healthcare. Centered on the theme *Better Care for Every Child: Practice That Delivers*, the conference brings together pediatricians, neonatologists, clinicians, researchers, nurses, allied healthcare professionals, academicians, policymakers, and industry experts from around the world.

EPN 2026 features a comprehensive scientific program comprising keynote and oral presentations, poster sessions, panel discussions, and interactive sessions. The program highlights research findings, clinical advancements, emerging approaches, and practical perspectives across pediatrics and neonatology, encouraging the exchange of knowledge and ideas that contribute to improved healthcare practices and outcomes for newborns, children, and adolescents.

Through its hybrid format, EPN 2026 provides opportunities for participants to engage, network, and collaborate both in person in London and virtually from across the globe. The conference reflects a shared commitment to strengthening pediatric and neonatal care through research, innovation, knowledge exchange, and interdisciplinary collaboration, while creating meaningful connections within the global child-health community.

About CPD Accreditation

About

EPN 2026 is officially accredited for Continuing Professional Development (CPD) by **The CPD Group (UK)**, a globally recognized provider of continuing education certification. CPD accreditation ensures that professionals continue to enhance their knowledge, skills, and competencies through structured learning activities.

At EPN 2026, participants can earn **1 CPD credit for every hour of attendance** in conference sessions. These credits formally recognize the time spent in professional learning and support ongoing professional development across clinical, academic, and research fields.

Earning CPD credits demonstrates a commitment to maintaining high professional standards and staying updated with the latest developments in pediatrics and neonatology. CPD participation can also support **career advancement, license renewal requirements, and academic or professional portfolios**, depending on the policies of individual institutions or regulatory bodies.

In addition to educational value, the conference provides opportunities to engage with experts, researchers, and peers from around the world, encouraging knowledge exchange and professional networking.

Attending **EPN 2026** not only offers a high-quality scientific learning experience but also provides internationally recognized CPD credits that reflect participants' dedication to continuous professional growth.

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KEYNOTE PRESENTATIONS





Ali Al Kaissi

Ilizarov Institute of Traumatology and Orthopedics, Russia

Biography: Ali Al Kaissi, MD, MSc, DSc (Hon), centers much of the work on one simple rule: that every skeletal deformity or abnormality must have an underlying causality that needs to be explored and addressed, stemming from the conviction that the vast majority of skeletal deformities — if not all — do not occur randomly. This clinical experience resulted in more than 220 published papers in peer-reviewed medical journals and five breakthroughs in medicine: Al Kaissi Syndrome (OMIM: 617694); Al Kaissi et al, 3MC syndrome (OMIM 257920); Al Kaissi novel type of Desbuquois syndrome (AJMG 2005); and Al Kaissi novel conception of Wormian Bones Diagnostics, J. Basel (2023).

The terms rare or orphan disease: The diagnostic bias toward severe phenotypes

Organizations such as the European Medicines Agency and the U.S. Food and Drug Administration define orphan diseases mainly based on prevalence of diagnosed cases and the severity of the classic phenotype. Rare or Orphan disease, is a common term in practice, rare disease is only applied to the severe recognizable syndrome (which in fact rare), but the mild and moderate types are so frequent. Rare disease manifests itself mostly soon after birth. But the mild and moderate showed up the abnormalities later in life. Physicians frequently use the term rare, or idiopathic because these are the easiest terms to apply. The mild and the moderate types of genetic disorders are the real risk in orthopedic practices and in other medical disciplines.

Because they manifest the health problem late in life, the gene hides itself for a decade or more. Then, suddenly, it showed up with a partial but serious skeletal or extra-skeletal abnormality.

Etiology understanding is crucial for a successful management. Variable expressivity and incomplete penetrance. Many inherited disorders show: Variable expressivity i.e severity varies widely among relatives. Incomplete penetrance i.e some carriers have minimal or no symptoms. This means that within one family you may see: One person with a severe rare disease phenotype but siblings, relatives are with mild or moderate manifestations. Family histories are often not collected in enough depth. Mild symptoms in relatives may

be considered coincidental rather than part of a shared inherited condition. In my current presentation, highlighting three-generational family study in which 13 family subjects showed variable disorders (mild-moderate clinical disorders). Whereas two siblings out of 13 family subjects showed the severe form of the disease.



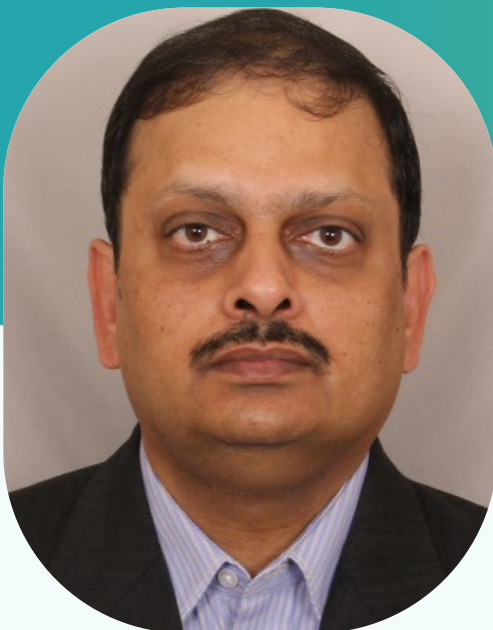
David J R Hutchon

Emeritus Consultant Obstetrician, Darlington Memorial Hospital, United Kingdom

Biography: A Consultant Obstetrician at Darlington Memorial Hospital for over 30 years, Hutchon started to question the science and validity of early cord clamping at birth in 2005 during a Sabbatical leave in New Zealand. Hutchon designed a computer simulation of the fetal and neonatal circulation which showed marked changes in the circulation if the cord was clamped quickly after birth before respiration has commenced. This stimulated the development of the LifeStart trolley and the hands-free Doppler neonatal heart rate monitor.

Physiological transition and resuscitation at birth

Up to 10 percent of babies require assistance at birth to commence breathing. This has been traditionally carried out away from the mother after the umbilical cord has been clamped. Early cord clamping was a routine at most births until ten years ago and remains common in any babies that need resuscitation. With increasing understanding and evidence that early cord clamping stresses the neonatal circulation causing a fall in cardiac output and long term hypovolaemia, cord clamping before respiration is established is illogical, but remains common because of the difficulty in providing PPV at the side of the mother with the umbilical cord intact. The provision of cord intact resuscitation requires preparation and optimally specially designed equipment. Monitoring the neonatal heart rate is a basic measure to determine whether the resuscitation measures are providing effective care. Most neonatal resuscitations carried out after early cord clamping are successful and there is no randomised controlled trial evidence for term babies that cord intact resuscitation is better than the traditional approach. Logically however, hypovolaemia is known to significantly affect the success of resuscitation unless and until the hypovolaemia is corrected. Clearly it is better to avoid the hypovolaemia in the first place. Logically exacerbating any hypoxic ischaemia of the cerebral circulation by clamping the cord before the pulmonary circulation is established needs to be avoided. Two good reasons why cord intact resuscitation at birth must become standard practice.



Deepak Sharan

RECOUP Health, Bengaluru, India

Biography: Dr. Deepak Sharan is a Consultant in Orthopedic Surgery, Rehabilitation, Ergonomics, Occupational Health, Functional and Lifestyle Medicine, and the Founder and CEO of RECOUP Health, Bengaluru, India. Sharan is the Chairperson of the Scientific Committee on Musculoskeletal Disorders of the International Commission on Occupational Health and the President of the International Myopain Society, with over 600 international scientific publications and conference presentations. Sharan is the winner of the National Disability Award and the world's highest Research

Awards in Orthopedics and Pediatric Orthopedics, has successfully treated over 1 million patients from 45 countries, and has a special interest in integrative, root-cause rehabilitation of childhood developmental disabilities.

Limbic system rehabilitation for childhood developmental disabilities

The limbic system, crucial for emotions, memory, motivation, circadian rhythms, and behavior, is often affected in Childhood Developmental Disabilities (CDD) like ADHD, Autism (ASD), and mood disorders, showing altered structures (especially the amygdala and hippocampus) and connectivity, making children vulnerable to emotional dysregulation, learning difficulties, and social challenges due to disruptions in brain development and plasticity, highlighting the need for early intervention for better outcomes. Sometimes, due to past stressful events, such as adverse childhood experiences or health issues, the limbic system's alarm mechanism can become stuck in the on position. It becomes extra sensitive, so it starts seeing danger everywhere—even when there isn't any. This is called limbic system dysfunction. Limbic System Rehabilitation (LSR) is a way of retraining the brain's alarm system. It teaches the brain that it's safe to relax and go back to a calm state. The goal is to create new, healthy brain patterns that replace the old, hyper-sensitive ones (neuroplasticity). It's like building new, peaceful roads in the brain to get around the old, chaotic ones. The program's goal is to help the brain produce more of the feel-good chemicals—Dopamine, Oxytocin, Serotonin, and Endorphins, and less of the stress chemicals, such as Cortisol and Adrenaline (the CAN state). LSR aims to alter the automatic, often negative, responses and perceptions that may originate from past trauma, rather than just depending on cognitive understanding. Emotional regulation enables individuals to develop healthier strategies for managing their emotions and mitigates the impact of past trauma on their current lives. The RECOUP LSR

program employs a structured, four-stage approach known as the 4R Approach: Relief, Root cause, Rebalancing, Regeneration. Key interventions and tools include Trauma-informed therapies, such as Somatic Eye Movement Desensitization and Reprocessing, Emotional Freedom Techniques, or Internal Family Systems; Neurofeedback; Cognitive Behavioral Therapy; Neurosomatic Therapy; Heart Rate Variability based Coherence Training; Physical therapy, including deep tissue massage, lymphatic drainage, therapeutic exercises, mindful movement, aquatic therapy and breathing exercises; Brain Stimulation, e.g., Transcranial Pulsed Electromagnetic Field Therapy; Mindfulness, Meditation, and Positive Psychology; Vagus Nerve Stimulation; Lifestyle adjustments, including regular exercise, a healthy diet, sufficient sleep, positive relationships, avoiding substance use, spending time in nature, limiting screen time, and creating a safe, low-stimulation environment; Nutrition and supplements to reduce brain inflammation and support healing; Detox and gut support if mold, toxins, or gut problems are contributing. It is necessary to work with an interdisciplinary team of qualified professionals who can provide guidance and support safely. While research on LSR is ongoing, studies suggest it may offer benefits for addressing various conditions, including CDD.



Gabriella Di Rosa^{1*}, Giulia Spoto¹,
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Biography: Prof. Gabriella Di Rosa was born in Messina, Italy, on November 26, 1975. Di Rosa graduated in Medicine and Surgery with highest honors (cum laude) from the University of Messina in 2000 and completed the residency in Child Neuropsychiatry with highest distinction in 2006. From 2007 to 2010, Di Rosa earned a PhD in Clinical Neurosciences at the same university. Since October 2021, Di Rosa has been Head of the Child Neuropsychiatry Unit at the University Hospital of Messina and Director of both the Residency School in Child Neuropsychiatry and the Postgraduate School in Neuropsychomotor Therapy, became Full Professor in December 2023, and has authored 137 international publications, receiving 3,630 citations with an H-index of 30.

Gastroesophageal reflux as a neurological mimic in hypotonic infants: Implications for early developmental assessment

Background: Early neurological assessment in infancy aims to identify infants at risk for Cerebral Palsy (CP) through the evaluation of tone, posture, and early motor patterns. Among these assessments, the Hammersmith Infant Neurological Examination (HINE) is widely used as a standardized tool, providing defined cut-offs to determine CP risk. However, during the first months of life, neurological examination may be influenced by conditions transiently altering the expression of postural control, in the absence of consistent structural brain damage. Gastro Esophageal Reflux (GER) is a common clinical finding in infants with central hypotonia and is well documented in the literature, especially among children with genetic syndromes characterized by early neuromotor vulnerability, including Down syndrome and

Prader-Willi syndrome. Its role in transiently modifying the clinical expression of early neurological signs and potentially complicating their interpretation during infancy remains undefined.

Objective: To investigate the relationship between HINE findings—particularly tone- and posture-related items—and the presence of GER, and to explore whether GER-related symptomatology may mimic early signs of cortical motor impairment, potentially suggesting an increased risk for CP.

Methods: We conducted a retrospective observational study including infants evaluated within the first year of corrected age, classified as low risk for CP, and presenting clinical symptoms of GER during infantile follow-up. Neurological examinations were analyzed with particular focus on HINE tone- and posture-related items. The internal coherence of neurological findings, the presence of axial–appendicular tone discrepancies, and longitudinal evolution were examined. Clinical features of GER and therapeutic interventions were documented.

Results: Preliminary data from 55 infants revealed a recurring neurological profile characterized by central hypotonia associated with incongruent postural and motor responses. Although baseline tone was reduced, several infants displayed abnormal postural reactions, extensor patterns, asymmetric responses, and altered axial control, particularly during pull-to-sit, ventral suspension, spontaneous posture, and selected passive tone items. These findings generated HINE scores and clinical patterns phenotypically compatible with early cortical or focal motor involvement, potentially simulating early indicators of cerebral palsy. Notably, these abnormalities lacked consistency across the neurological examination and demonstrated progressive improvement over time, particularly following the management of reflux-related symptoms.

Conclusions: Our findings are consistent with the hypothesis that, in infants with underlying hypotonia, gastroesophageal reflux may act as a neurological mimic, transiently interfering with postural control and tone expression. This interaction may generate neurological signs phenotypically resembling early cortical motor impairment and result in falsely pathological HINE scores suggestive of increased CP risk. Recognition of this mechanism may help clinicians interpret early neurological examinations more accurately and reduce the risk of false-positive prognostic assessments during infancy.



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Biography: Dr. Hanna A. Alonim is an expert and researcher in the autism spectrum in infancy, Founder and Head of the Mifne Center Israel, for Treatment, Training, and Research, since 1987, and Head of the Therapists' Training School for Autism in Infancy at the Bar Ilan University. Alonim developed the ESPASSI© screening scale for the detection of autism prodrome in the first year of life and established the pioneer infant detection Unit at the Ichilov Hospital in TLV. Alonim is a member of the Norland Journal Editorial Board, Consistent Reviewer of JADD, and a committee member of the ICF Core Set for

ASD, WHO, Stockholm 2016.

Bridging the gap between early detection of autism prodrome in infants, assessment and intervention

The worldwide prevalence of autism points out of 2% of the population. Very early intervention may minimize the severity of the phenotypic presentation of autism during infancy when neural connections are being rapidly developed. However, intervention is contingent upon a diagnosis of autism – which in most developed countries occurs above the age of 24 months – resulting in missing a critical therapeutic opportunity for early intervention. Our study aimed to detect the prodromal variables at a very early stages during the first year of life, that may characterize significant risk for the later development of autism. The study examined 110 infants from various countries diagnosed with autism at age 2-3 years. Analysis was conducted of home videos recorded during the infants' first year of life. Data was collated and analysed in terms of individual variables and combinations of variables. Eight prodromal variables were exhibited among 89% of the infants participating in this study. The results of this study indicate that detecting the prodrome of autism depends primarily on the ability to identify various combinations of indicative symptoms. The variables elicited by this study provide the basis for an early assessment scale for prodromal variables associated with autism, which is applied clinically for infants between 5-15 months. This presentation is aimed to raise awareness of early detection, and will be accompanied by videos. Effective application of the screening scale ESPASSI© is of utility in bridging the divide between early assessment and intervention for infants at high risk for autism during the very early neurodevelopmental stages. Clinical therapeutic sample will be presented in this lecture.



Hedy Cleaver*, Wendy Rose*

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Biography: Hedy Cleaver is an Emeritus Professor at Royal Holloway College, University of London. Cleaver's experience as a social worker and child psychologist informs research on vulnerable children and families and the impact of professional interventions, guided by a desire to improve the



quality of life for children living in circumstances that place them at risk of abuse and neglect. The main body of the research focuses on three areas: vulnerable children within the family, in school, and in state care, and findings have had an identifiable impact on policy and practice in the UK in respect to children and families for more than 30 years. Recent research focuses on perinatal death and the support available for grieving parents.

Wendy Rose has a background in social work practice and social services management, and was a senior civil servant in England advising on children's policy. As a Senior Research Fellow at The Open University and later an Honorary Research Fellow at Cardiff University, she was an adviser to the Scottish Government on developing its children's policy and subsequently to the Welsh Government on safeguarding reforms. She has worked extensively on national and international projects. Major themes of her work are improving child and family wellbeing, developing and implementing change, and evaluating outcomes for children.

Baby loss: A melancholy void

Miscarriage and stillbirth are not rare events and losing a baby can have an overwhelming and long-term impact on parents, existing and subsequent children, and on wider family. Potential parents' feelings of devastation, intense grief, anxiety, guilt and self-blame and loss following such a death, have been identified in literature written over past centuries. Fifty years ago miscarriage and stillbirth were a private matter and unspoken of, leaving parents to manage their grief alone. The presentation aims to shine a light on the changes in attitudes and the support available to those who have experienced miscarriage and perinatal death since the 1960s.

A review of relevant research, policy and practice identified significant advances in medical science and major changes to the law; changes that have influenced attitudes to abortion, same-sex parenthood, and single mothers. Medical advances have made childbirth safer and the use of IVF has extended the opportunity of motherhood to a wider group of women. The campaigning of numerous charities has led to far greater understanding of the impact of

baby loss on parental mental health and parenting capacity. Their work in conjunction with the NHS has resulted in greater information and support being provided to grieving parents within both hospital and community settings and in Government commitment to providing high quality bereavement care.



Jo Vrancken, Ine Achten*

PXL University College, Hasselt, Belgium

Biography: Ine Achten is a Lecturer-Researcher at PXL Healthcare Innovation, PXL University College, Hasselt, Belgium, where she teaches developmental psychology and comfort care to nursing students. She holds an MSc in Clinical Psychology and leads the PARCOMPAIN project, studying parents' cognitions about pediatric procedural pain and comfort care, in collaboration with Dr. Line Caes (University of Stirling) and Dr. Emma Rheel (Vrije Universiteit Brussel). Her work builds on a PXL research line on pediatric comfort care since 2014. She also organizes Healthcare Labs for Kids, helping

preschoolers become familiar with medical materials and procedures, and is a member of the Flemish faculty of PROSA (Procedural Sedation and Analgesia), which advances procedural comfort care, successful medical care free of fear, pain and stress that preserves children's trust in healthcare, by embedding respect, connection and trust between healthcare providers, children and parents.

Parental cognitions on procedural pain and comfort in young children

Procedural pain and discomfort during pediatric medical interventions remain a significant challenge for healthcare providers and families alike. While clinical guidelines emphasize pain management and child-centered care, little is known about how parents cognitively frame these experiences and how their beliefs influence both their own behavior and their child's coping. This study explores parental cognitions regarding procedural pain and comfort in young children, drawing on qualitative data from in-depth interviews with parents whose children underwent medical procedures in a hospital setting.

The analysis reveals that parental perspectives are multidimensional, encompassing beliefs about the necessity of medical interventions, expectations toward healthcare professionals, and strategies to mitigate distress. Parents oscillate between prioritizing procedural efficiency and advocating for their child's emotional well-being, often negotiating a tension between trust in professionals and the desire for active involvement. Their interpretations of pain are shaped not only by the physical sensation but also by contextual factors such as prior experiences, communication quality, and perceived empathy from staff. Comfort is conceptualized broadly, extending beyond analgesia to include psychological reassurance, predictability, and relational support.

These findings underscore the critical role of parents as emotional regulators and decision partners during pediatric procedures. They highlight the need for healthcare teams to address parental cognitions explicitly, fostering shared understanding and collaborative strategies that integrate technical competence with emotional care. By acknowledging parental beliefs and expectations, professionals can enhance procedural experiences, reduce anxiety, and promote resilience in both children and their caregivers.

This study contributes to a growing body of research on family-centered care by illuminating the cognitive and emotional frameworks through which parents interpret procedural pain and comfort. Implications for practice include tailored communication, anticipatory guidance, and structured involvement of parents in comfort interventions. Future research should examine how these cognitions interact with child outcomes and inform interventions aimed at optimizing procedural support in pediatric settings.



Marlene Fabiola Escobedo-Monge^{1,2,3*}, Joaquin Parodi-Roman⁴, Maria Antonieta Escobedo-Monge⁵, Jose Manuel Marugan-Miguelsanz^{1,3,6}

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Biography: Marlene F. Escobedo Monge is a paediatrician and Doctor of Medicine for the Faculty of Medicine of the University of Valladolid, with a doctorate in health sciences research, a master's degree in clinical nutrition, and another in biological aspects of nutrition and microbiota. Escobedo Monge is very interested in food safety and biofortification, especially in studies on micronutrients and their bioavailability, considering the interrelationship between macro and micronutrients in the food chain, and as part of a research team is primarily concerned with the nutritional status of patients with malnutrition and chronic diseases, such as patients with cystic fibrosis.

The biological value of proteins for pediatric growth and development: Advances and criticisms

In personalized nutrition, it is essential to account for the biological value of protein sources that underpin children's growth and developmental needs. Although sufficient protein intake is fundamental for optimal physical and cognitive development, excessive intake may accelerate linear growth and increase the long-term risk of overweight and obesity. Compared to Animal-Based Proteins (ABPs), Plant-Based Proteins (PBPs) carry a higher risk of nutrient deficiencies in vulnerable populations due to lower digestibility and incomplete amino acid profiles.

Plant-forward dietary patterns are often promoted for environmental sustainability, particularly to mitigate the ecological burden of livestock production. Nonetheless, we need to adjust protein intake based on age, sex, health status, and contextual factors.

Nutritional strategies must ensure an adequate supply of essential amino acids and proper micronutrient supplementation, regardless of whether children follow diets rich in ABPs, PBPs, or a combination of both. Attention to these dimensions is crucial for achieving nutritional adequacy while aligning with long-term health and sustainability objectives.

Public health strategies must be context-dependent, prioritizing nutritional sufficiency and equity rather than broad, ideology-driven recommendations. Neglecting socioeconomic and nutritional constraints risks implementing poorly targeted policies that may ultimately be detrimental. Dietary guidelines and food-system actions must address not only the long-term consequences of excess in high-resource environments but also the immediate threats posed by nutrient deficiencies in at-risk populations.

International guidance on protein intake must therefore be rigorous, evidence-based, and attuned to social realities. Overlooking these factors risks perpetuating nutritional disparities and diminishing the effectiveness of global food and health initiatives. International institutions need to reassess whether existing frameworks are suitable for these standards or risk repeating ineffective interventions, despite good intentions. Substantial challenges persist in translating this body of knowledge into personalized nutritional recommendations, particularly for pediatric populations and those living in nutritionally vulnerable conditions.



Renee J Dufault

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Biography: Dr. Dufault completed a PhD at A.T. Still University, and retired early from a position as a US Public Health Service officer at the Food and Drug Administration (FDA) to publish findings of mercury in high fructose corn syrup. As an FDA whistleblower, Dufault could not find employment as a researcher, and so founded the non-profit Food Ingredient and Health Research Institute, where the work continues as a volunteer, supplementing the income by working as a licensed special education teacher. Dufault currently serves as chair for the American Society of Nutrition's Nutrient-Gene Interactions Research Interest

Section.

Applied nutritional epigenetics: Exploring the role of diet in exacerbating or mitigating lead (Pb) toxicity

Research in the area of nutritional epigenetics involves the study of atoms in food that impact gene behavior. Prenatal co-exposures to heavy metals are known to cause changes in DNA methylation patterns which impact gene behavior in offspring. A recent literature review was conducted using PubMed as a primary resource for identifying current findings on the impact of prenatal heavy metal co-exposures on offspring. The literature review indicates there is strong evidence to suggest prenatal co-exposures to heavy metals are common and impact childbirth and developmental outcomes. Recent studies show co-exposures to maternal lead (Pb), mercury (Hg) and cadmium (Cd) during pregnancy interacted synergistically to impair offspring cognition, memory, language acquisition ability, and memory. Low level exposures to these heavy metals have triggered risk taking in offspring with Pb exposure exhibiting a significant and long-term effect. Strong evidence suggests there is no safe level of exposure to lead. Lead exposures are easy to diagnose via blood collection and analysis. Because evidence now suggests lead promotes synergistic and long-lasting effects in a mixed metal co-exposure environment, it is increasingly urgent to reduce even low lead exposures in pregnant women. In China, dietary approaches are used routinely to treat low lead exposures. Results of a literature review indicate that the consumption of milk or dairy products, fruits, and calcium supplementation counteract lead in a negative dose-response relationship. Evidence suggests the molecules of greatest effect in counteracting lead are calcium, vitamin D, zinc, and selenium.



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⁷PMC (Personalized Medicine Coalition), Washington, USA

⁸AMEE (Association for Medical Education in Europe), Centre for Medical Education, Dundee, Scotland

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¹⁴The Russian Academy of Natural Sciences, Moscow, Russia

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¹⁶Harvard Medical School, Boston, MA, USA

¹⁷Oracle Life and Health Sciences Strategic Development, Oracle, S-F, CA, USA

¹⁸Faculty of Health, School of Nursing & Midwifery, Melbourne Burwood Campus, Australia

¹⁹International Diabetes Federation, Melbourne, Australia

Biography: Dr Sergey V. Suchkov, MD, PhD, was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, Suchkov graduated from Astrakhan State Medical University and was awarded an MD; in 1985, maintained a PhD as a student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology; and in 2001, maintained a Doctor Degree at the National Institute of Immunology, Russia. From 1989 through 1995, Suchkov was Head of the Laboratory of Clinical Immunology, Helmholtz Eye Research Institute in Moscow, and from 1995 through 2004 a Chair of the Department for Clinical Immunology, Moscow Clinical Research Institute (MONIKI); in 1993-1996, was Secretary-in-Chief of the Editorial Board of Biomedical Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK. At present, Suchkov is Professor in Medicine & Immunology and Director for the Center for Biodesign at the N.D. Zelinskii Institute for Organic Chemistry of the Russian Academy of Sciences, Moscow, R&D Director of InMedStar (Russia-UAE), and a member of numerous international bodies including the

Personalized and Precision Medicine (PPM) as the unique healthcare model to secure the national health and wellness: From family planning and gestation period through human biosafety

A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, Personalized & Precision Medicine (PPM). PPM as being the Grand Challenge to forecast, to predict and to prevent is rooted in a big and a new science generated by the achievements of systems biology and translational medicine, whilst integrating platforms of OMICS- and IT-technologies.

NIH (Bethesda, MD, USA) have The Unique Decision had on setting up in USA a Clinical Research Network including Centers of PPM, Centers for Personalized & Precision Pediatrics (CPPP) and Reproductive Precision Medicine Centers (RPMC, e.g., at Columbia University).

The concept of PPM and RPMC has been applied in reproductive medicine long before its popularization. Due to the multifactorial etiology of the fertility problems and complications, with genetic-, environment-, and lifestyle-associated factors being involved, developing precise methods able to overcome them during gestation is a high priority. The causes of infertility are various, and factors influencing the success rates of ART are complicated; hence, every step of reproductive medicine, such as the diagnosis of infertility causes and transfer of healthy embryos, needs to be precise.

In the obstetric field, several opportunities exist to leverage PPM-guided diagnostic and treatment tool, as well as for the development of innovative strategies with the potential to overcome the challenges associated with fetal growth restriction, preterm birth, and fetal abnormalities, to state a few.

One of the well-known uses of PPM-related resources in reproductive medicine and family planning and female infertility is the genetic test that most accurately determines how receptive a woman's endometrium (inner uterine lining) is for implanting an embryo. Genomics and proteomics tests represent examples of methods to investigate the molecular level of male infertility as well. Perhaps what is currently being offered as personalized treatment of infertile patient is more based on the best expert opinion of the attending clinician than the best evidence-based data available. In this sense, The Columbia University Reproductive Precision Medicine Center is perfectly positioned to be a global leader in the development and implementation of these approaches. And PPM and personalized and precision genomics as the major part of the Reproductive medicine & Family planning are a new and exciting field with the potential to significantly improve medical care for pregnant women and newborns.

In general, four major types of genomic biomarkers are crucially important and valuable for PPM-related services: Diagnostic, Predictive, Monitoring and Prognostic ones, to be used in most of genomic testing platforms. Among the testing panels are: Carrier testing, Pre-symptomatic & Predictive Testing, Pre-conception testing, Newborn testing, Prenatal testing (NIPT), Nutriogenomic and Pharmacogenomic testing.

The use of genomic profiling for pregnant women and prenatal diagnosis of fetuses with sonographic abnormalities has grown tremendously over the past decade. Fetal genomic screening also offers an opportunity to identify incidental genomic variants that are unrelated to the fetal phenotype but may be relevant to fetal and newborn health. In this context, Fertility Awareness-based Methods (FAMs) represent the harmony of science and self-awareness. By tuning into your body's natural rhythms, these precision methods empower you to make informed decisions regarding conception – or its prevention, often in consultation with your obstetrician.

Improved patient (or persons-at-risk) outcomes must consider not only increased survival, or quality of life, but also improved Clinical Decision Support (CDS) & making! Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of health care resources. A lack of medical guidelines has been identified by the majority of responders as the predominant barrier for adoption, indicating a need for the development of best practices and guidelines to support the implementation of PPM!

Meanwhile, family planning specialists have the unique and exhilarating responsibility to help ensure that young patients derive maximal benefit from genomics which, in turn, will provide the family planning specialists new and often unexpected insights into the biological basis of health and disease and will afford new health care options requiring informed and sometimes challenging choices of physicians and patients. So, developing reproductology-related expert-driven competency in genomics is a daunting task, but one that the specialty can and must accomplish in the near future. Achieving such competency will provide effectively integrating genomics into practice, will improve reproductology-related experts' effectiveness in caring for patients current health concerns and will make experts the guides to lifelong health. For reproductive medicine, precision has always been a criterion in every procedure, including etiology-oriented examination, specific diagnosis, identifying healthy embryos, WOI, and accurate implantation. Combined with genetic information and a large volume of biomedical data, an unknown territory of reproductive medicine will be explored, and the mechanisms underlying the causes of infertility that we do not yet know will be elucidated. The application of PPM has become a guideline for the development of medicine, especially for reproductive medicine.

PPM in reproductive health involves using an individual's genetic and biological information to design customized treatment plans for fertility and related conditions. From identifying genetic mutations that impact fertility to tailoring hormonal therapies, PPM allows fertility specialists to develop interventions that maximize success while minimizing risks. PPM offers numerous applications in reproductive health, addressing a wide range of challenges:

(i) genetic testing and screening, (ii) preimplantation genetic testing, (iii) tailored fertility treatments, (iv) predicting treatment success, (v) optimizing embryo selection, (vi) understanding immune factors in fertility, (vii) precision prenatal care, (viii) informed decision-making, (ix) pre-early diagnosis of underlying conditions.

In this sense, PPM is gaining momentum in the family planning and obstetrics field for its potential to revolutionize the standard of care and lead to better outcomes for both mothers and babies. The possibility of improving prevention and containing side effects will contribute to controlling overall healthcare costs through the treatment of potentially critical conditions for pregnant women and their offspring.

PPM is transforming the landscape of Obstetrics, Family Planning and Reproductive Medicine as a whole, offering tailored approaches to care that enhance patient outcomes. From genetic screening and counseling to PPM-guided oncology and hormonal therapies, PPM has the potential to revolutionize women's and offspring healthcare. However, successful implementation requires collaboration among healthcare providers, geneticists, biodesigners and researchers, alongside continued advancements in technology and ethical frameworks. By embracing PPM, reproductive medicine and family planning can pave the way for a future where women receive individualized, evidence-based care, leading to improved health and well-being.



Steven M. Donn

Michigan Medicine, University of Michigan, Ann Arbor, MI
48103, United States

Biography: Steven M. Donn, MD, FAAP, FAARC, is Professor Emeritus of Pediatrics at the Michigan Medicine and a member of the Division of Neonatal-Perinatal Medicine. Donn is actively involved in teaching, writing, editing, and clinical research, is a member of the SPR, APS, and ESPR, and is internationally known for expertise in the management of respiratory failure in newborns. Donn is a Fellow of the American Association for Respiratory Care for contributions to the profession of respiratory care, and has authored more than 255 articles, written/edited 38 books and specialty journals, and contributed 260 book chapters.

Lost pearls of neonatal pulmonology

Neonatal respiratory care has been characterized by tremendous technological advances over the past five decades. However, lost in the shuffle are some tried and true aspects of care that remain relevant but have fallen into disuse. This presentation will summarize the recent history of neonatal respiratory care and will focus on the lost pearls, including assessments of pulmonary gas exchange, oxygen transport, lung mechanics, and forgotten procedures (transillumination and manual intubation of the airway).



Zhenhuan Liu

Nanhai Maternity and Children Hospital Affiliated to
Guangzhou University of Chinese Medicine, China

Biography: Zhenhuan Liu, professor of pediatrics, pediatric acupuncturist, Ph.D. tutor, has been engaged in pediatric clinical and child rehabilitation for 40 years. Liu led the rehabilitation team to treat more than 40,000 cases of children with intellectual disability, cerebral palsy and autism from China and more than 20 countries; more than 26,800 children with deformity returned to school and society and became self-sufficient, and the rehabilitation effect ranks the international advanced level. Liu is Vice-chairman of the Rehabilitation professional committee for children with cerebral

palsy, World Federation of Chinese Medicine Societies, and Visiting Professor of the Chinese University of Hong Kong in recent 10 years, is among the most famous pediatric neurological and rehabilitation specialists in integrated traditional Chinese and Western medicine in China, has edited 10 books, and has published 268 papers in international and Chinese medical journals.

Neuroimaging-based evaluation of scalp acupuncture for neural repair and reorganization in children with cerebral palsy

Objective: To investigate the effect of acupuncture on brain plasticity and motor development in children with cerebral palsy; to investigate the effect on the mechanism of apoptosis of brain nerve cells, regulating the expression of neurotrophic factors, promoting the remodeling of nerve synaptic structure and motor development in young rats with cerebral palsy; to evaluate the effect and mechanism of acupuncture on cerebral palsy; and the nerve repair effect of acupuncture on cerebral palsy.

Methods: In this study, 146 cases of brain injury and 1078 cases of cerebral palsy were included by randomized controlled study with ICF Gross motor function measure, Peabody fine motor function, Gesell, muscle tension, joint activity, activity of daily living, transcranial doppler, skull B ultrasound, Brain Nuclear Magnetic Resonance Imaging MRI, Positron Emission Tomography SPECT, and Diffusion tensor tractography evaluation method.

Results: The recovery rate of extracellular space (92.3%) was significantly higher than that of the control group (70.8%) ($P < 0.05$); Transcranial Doppler (TCD) total efficiency (79.3%) was significantly higher than that in the control group (51.8%) ($P < 0.05$). Acupuncture promoting the development of neurological and cognitive movement under 6 months children effectively reduce the neurological sequelae. The total effective rate of the children with cerebral palsy

was 87% in the acupuncture group, which was significantly higher than that of the control group ($P<0.01$). The total effective rate of Brain MRI was 59.55% in the acupuncture group and 13.25% higher than that in the control group ($P<0.01$). The total effective rate was 91.3% in the 1 year follow-up group, which was significantly higher than that in the control group ($P<0.01$). The FA value of white matter fiber bundle was significantly higher than that of acupuncture at 60 times ($P<0.05$). The recovery rate of ultrasonous brain injury (86.7%) in acupuncture group was significantly higher than that in control group (64.4%) ($P<0.05$). The recovery rate of brain SPECT in acupuncture group was 96.4%, which was significantly higher than that in the control group ($P<0.01$).

Conclusion: Acupuncture rehabilitation not only promote the development of white matter and gray matter in children with cerebral palsy, but also promote the brain function of children with cerebral palsy remodeling and compensation, and promote social adaptation, language and other cognitive function development, children with cerebral palsy movement and fine motor function development and recovery, improve the children's self-care ability.

Keywords: Cerebral Palsy, Acupuncture, Nerve Repair, Remodeling, Motor Function.

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ORAL PRESENTATIONS





Amrita Dosanjh, M.D.

Rady Children's Hospital, San Diego, United States

Pediatric chest pain

Pediatric chest pain is a common clinical condition among the pediatric population. Acute chest pain often results in presentation to urgent care or emergency services. The recognition and treatment of emergent causes of pediatric chest pain is of utmost importance in improving clinical outcomes. In addition, reduction of unnecessary, low yield testing is possible by distinguishing emergent from non-emergent conditions.

In the era of advanced diagnostic testing, imaging and artificial intelligence, distinguishing emergent from non-emergent conditions could become more efficient and lead to earlier treatment.

Idiopathic benign, self-limited and musculoskeletal chest pain, among an otherwise healthy pediatric population are common conditions. The identification of the hallmark clinical, laboratory and imaging features of more serious causes will be highlighted in this presentation. The review focuses on pulmonary and cardiac conditions, based on epidemiologic studies.

The specific goals of the summary are to:

Identify emergent causes of pediatric chest pain

Describe clinical features of pulmonary etiologies of chest pain

Identify the radiographic and laboratory markers associated with specific causes of pediatric chest pain

In addition, a review of studies will be included. Key imaging findings found on chest x-rays include hallmark features which aid in establishing the diagnosis.

An introduction to the anatomy of the cardiac origins of chest pain, chest wall and innervation of the pleura will establish the pathogenesis by anatomic location. The organization of the summary of the highlighted conditions of pediatric chest pain includes literature relevant to chest wall, cardiac and pulmonary disease.

Systemic diseases associated with chest pain, including the SARS-CoV-2 complications of MIS-C, vaccine/non-vaccine related myocarditis and sickle cell disease/acute chest syndrome are additional less common serious causes of pediatric chest pain.

In conclusion, this summary of anatomic, clinical, imaging and diagnostic testing provides a framework for clinical diagnostic approaches to the patient with pediatric chest pain.

Biography

Dr. Amrita Dosanjh is a Pediatric Pulmonologist. Dosanjh's research interests include obstructive lung diseases. Dosanjh is a graduate of Brown University and the University of California-San Diego School of Medicine. Fellowship training included Harvard and Stanford University.



B Tahir*, R Varma¹

Department of Paediatrics, James Paget University Hospital,
Great Yarmouth, United Kingdom

Don't forget your inhaler! - Improving inhaler technique assessment in a paediatric respiratory clinic using SMS reminders

Background: Inhaler technique is an important component of effective asthma management, with national recommendations supporting regular assessment and review. However, assessment may not be possible when patients do not bring their inhaler and spacer to clinic. This quality improvement project aimed to improve inhaler availability for assessment and increase the proportion of patients receiving inhaler technique review in a paediatric respiratory clinic.

Methods: A baseline audit was undertaken among randomly selected patients attending a paediatric asthma clinic over a 4-week period. Three months later, the audit was repeated over a similar period following implementation of an additional SMS reminder intervention. Patients continued to receive the standard clinic appointment letter. In addition, parents/carers received an SMS reminder the day before the appointment confirming the date and time and specifically reminding them to bring the patient's inhaler and spacer to clinic.

Results: At baseline, 7/23 patients (30.4%) brought their inhaler to clinic and 6/23 (26.1%) received an inhaler technique review. Following introduction of the SMS intervention, 10/16 patients (62.5%) brought their inhaler to clinic, representing a 32 percentage-point increase. The proportion receiving documented inhaler technique assessment increased to 10/16 (62.5%), a 36 percentage-point increase. The SMS intervention was delivered to all patients in the re-audit cohort (16/16, 100%). Among patients assessed, the proportion requiring correction of inhaler technique increased from 2/6 (33%) to 4/10 (40%). The increased number of assessments also identified equipment-related problems, including cracked or inappropriate spacers and

device leaks, alongside technique errors such as failure to shake the inhaler and incorrect cleaning.

Conclusion: Addition of a simple SMS reminder to the existing clinic appointment letter increased the proportion of patients bringing their inhaler to clinic from 30.4% to 62.5% and enabled a corresponding increase in documented inhaler technique assessment. The intervention improved the reliability of the assessment process and identified previously unrecognised technique and equipment-related problems. Further quality improvement cycles will focus on standardising inhaler technique assessment and education and addressing equipment-related barriers.

Biography

Dr Tahir completed his MBBS from University of East Anglia in Norwich in 2022. Tahir went on to complete his foundation training from James Paget University Hospital in Great Yarmouth. After working in the Department of Paediatrics as clinical fellow, Tahir is now moving on to work in a tertiary neonatal unit at the Norfolk and Norwich University Hospital.



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Acute gastrointestinal injury in children on ECMO: An analysis of risk factors

Objective: To investigate the risk factors associated with acute gastrointestinal injury (AGI) during extracorporeal membrane oxygenation (ECMO) therapy in pediatric patients.

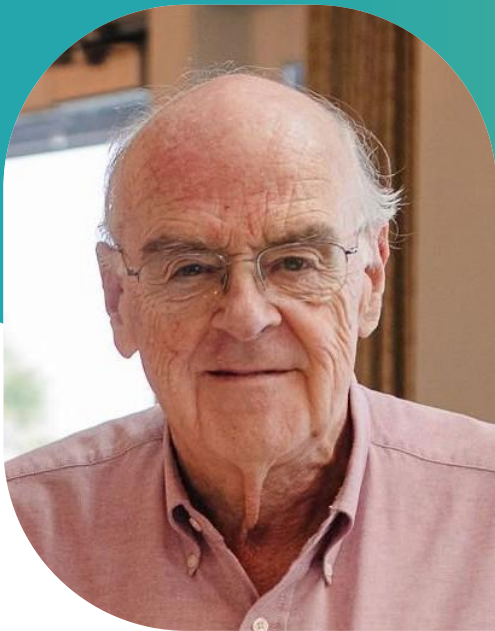
Methods: This retrospective study included 62 pediatric patients who were treated with ECMO at Gansu Provincial Maternal and Child Health Hospital and Xi'an Children's Hospital, Shaanxi Province, from January 2019 to May 2025. Patients were categorized into two groups according to the European Society of Intensive Care Medicine (ESICM) criteria: the significant AGI group (patients with grade II or higher AGI) and the non-significant AGI group (patients without AGI or with grade I AGI). General characteristics and clinical and laboratory parameters were compared between the groups. Binary logistic regression was used to analyze risk factors for significant AGI.

Results: Significant AGI occurred in 28 (45.16%) patients, while non-significant AGI occurred in 34 (54.84%) patients. Univariate analysis revealed that the duration of ECMO, pre-ECMO blood lactate levels, the vasopressor-inotrope score (VIS), the enteral nutrition initiation time, and pre-ECMO proton pump inhibitor (PPI) use significantly differed between the groups ($P < 0.05$). Logistic regression analysis revealed that the ECMO duration, pre-ECMO blood lactate levels, and pre-ECMO PPI use were independent risk factors for significant AGI in pediatric patients receiving ECMO, whereas early (within 48 h) initiation of enteral nutrition was a protective factor.

Conclusion: The incidence of significant AGI in pediatric patients receiving ECMO therapy is high. Elevated pre-ECMO lactate levels, prolonged ECMO duration, and pre-ECMO PPI use are independent risk factors for significant AGI, whereas early enteral nutrition (within 48 h) is a protective factor.

Biography

Bin Yan holds a master's degree and is an attending physician. Yan is a senior instructor for AHA life support and PFCCS training, as well as a BLS basic life support training instructor. Yan has participated in three multicenter studies and published more than 10 papers in Chinese and English. Yan is mainly engaged in critical care work, including extracorporeal life support management, sepsis, ARDS, central nervous system infections, childhood accidents, and other critical care areas.



Edwin W. Naylor

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Newborn metabolic screening – past, present and future

Newborn metabolic screening had its origin in the 1960s with the introduction of the Guthrie Bacterial Inhibition Assay (BIA) for PKU. For nearly 20 years, the BIA was used to screen for PKU plus a number of additional disorders including maple syrup urine disease, tyrosinemia, and homocystinuria. In the mid-1970s the BIA assays were replaced by fluorometric assays; and newborn screening for congenital hypothyroidism, congenital adrenal hyperplasia, and cystic fibrosis was introduced using radioimmunoassays or enzyme immunoassays. Second-tier confirmatory DNA testing for common mutations in cystic fibrosis, galactosemia, biotinidase deficiency and MCAD deficiency was introduced using PCR and light cycler technology. Tandem mass spectrometry was introduced in 1992 for amino acid and acylcarnitine profiling. This amino acid scan replaced the BIA and fluorometric assays for PKU and the other amino acid disorders, while the acylcarnitine scan permitted the detection of disorders in organic acid metabolism (propionic, methylmalonic, isovaleric, glutaric acid and 3-Me-Crotonyl Glycinuria, as well as HMG CoA Lyase, β -Ketothiolase, and Multiple CoA Carboxylase Deficiencies) and fatty acids oxidation metabolism (MCAD, LCHAD, VLCAD, SCAD, CPTII and MADD). Duchenne muscular dystrophy and spinal muscular atrophy are being incorporated into some newborn screening programs. In recent years, many newborn screening programs have added screening for various lysosomal storage disorders including globoid cell leukodystrophy (Krabbe), Gaucher, Fabry, Mucopolysaccharidosis I (Hurler) and II (Hunter), acid sphingomyelinase deficiency, and Pompe disease. Initially these disorders were screened for using individual enzyme assays, but more recently these assays have been replaced by tandem mass spectrometry, high performance liquid chromatography, and digital microfluidics.

The current cost of comprehensive newborn screening programs is rapidly approaching the point where primary targeted Whole Exome (WES) or Whole Genome Sequencing (WGS)

will become cost-effective. Already there are large scale pilot molecular newborn screening programs underway in many parts of the world. The Generation study in the UK led by Genomics England in partnership with the NHS focuses on >200 treatable conditions and plans to sequence 100,000 newborns. Other large scale newborn molecular screening studies include the BeginNGS in California, ScreenPlus in New York, and FirstSteps in Greece. Most European countries have pilot studies. There are also studies in Australia, China, and other Asian countries. It is important to note that, as we move toward primary molecular newborn screening, we will need to maintain second-tier biochemical methods to determine if the variants that are detected are pathological or benign polymorphisms. The future of newborn screening as it incorporates WES or WGS over the next decades will be filled with the addition of hundreds of treatable disorders and we will be faced with many exciting challenges. Newborns in the future will, however, be the beneficiaries of this exciting expansion of a very successful public health program.

Biography

AB, Middlebury College; Ph.D., Utah State University; M.P.H., University of Pittsburgh. Board certified in Clinical Biochemical Genetics and Ph.D. Medical Genetics. Post-Doctoral fellowship with Robert Guthrie (1972-1974) and research associate (1974-1984). Research focused on development of newborn screening methodologies and biochemical genetics, University of Pittsburgh (1984-1994). Founded NeoGen Screening; the laboratory screened 3.2 million newborns using tandem mass spectrometry and molecular genetics. Naylor is currently laboratory director of NCGM in North Carolina (molecular genetic analyses) and miQro Lab in Rhode Island (heavy metal screening). Interests are expansion of newborn screening to include heavy metal and next generation molecular newborn screening.



Esraa K. EL-Baz

Pediatrics Department, Faculty of Medicine, Menoufia University, Egypt

When autoimmune encephalitis isn't the answer: A challenging case of opsoclonus-myoclonus syndrome

Background: Opsoclonus-Myoclonus Ataxia Syndrome (OMAS) is a rare, immune-mediated neurological disorder of childhood, frequently associated with neuroblastoma. Its clinical presentation may overlap considerably with infectious or autoimmune encephalitis, particularly during the early stages of disease. Recognition of the characteristic movement disorder is essential, as delayed diagnosis may result in prolonged neurological morbidity.

Case Presentation: A 15-month-old girl presented with fever, persistent vomiting, convulsions, bulbar manifestations including choking and swallowing difficulties, followed by progressive inability to walk. Cerebrospinal Fluid (CSF) examination showed elevated protein (295 mg/dL), glucose of 68 mg/dL, and fewer than five lymphocytes, with negative culture. The initial CSF IgG index was 0.17. Brain magnetic resonance imaging and electroencephalography were normal. Based on the initial presentation, treatment for viral encephalitis was initiated; however, there was no clinical improvement. On reassessment, the CSF IgG index had increased to 0.62, raising suspicion of an immune-mediated process. N-Methyl-D-Aspartate Receptor (NMDAR) antibodies were negative, and EEG remained normal. The patient subsequently received treatment directed toward autoimmune encephalitis, again without significant improvement.

During hospitalization, careful clinical observation revealed characteristic abnormal eye and limb movements. The eye movements were spontaneous, involuntary, conjugate, multidirectional, arrhythmic saccades occurring in all directions of gaze and persisting during sleep, consistent with opsoclonus. Nonepileptic lightning-like limb movements consistent with myoclonus were also observed. These findings were accompanied by marked irritability

and behavioral changes, including excessive crying and self-biting. The combination of opsoclonus, myoclonus, ataxia, and behavioral disturbance shifted the diagnostic consideration toward OMAS.

Investigations and Outcome: Extensive evaluation for an underlying neuroblastoma, including spinal MRI, abdominal ultrasonography, PET-CT, and urinary vanillylmandelic acid and homovanillic acid measurements, was negative. Neuroblastoma and other malignancy were therefore excluded. Treatment was subsequently initiated according to an OMAS-directed regimen. The patient showed marked clinical improvement with ACTH immunotherapy. After six months of treatment, she had returned to an essentially normal neurological state, with only a slight residual cognitive deficit.

Conclusion: This case highlights the diagnostic challenge posed by OMAS when its initial presentation mimics encephalitis. Normal neuroimaging and EEG, persistent ataxia, poor response to encephalitis-directed therapy, and the later emergence of characteristic opsoclonus and myoclonus should prompt reconsideration of the diagnosis. Careful longitudinal neurological examination is crucial, as the characteristic movement disorder may appear late and can be missed initially. Early recognition of OMAS and appropriate evaluation for an underlying neuroblastoma are essential for timely treatment and improved neurological outcome.

Biography

Dr. Esraa Kamal El-Baz studied at the Faculty of Medicine, Menoufia University, graduating in 2013, then spent the internship year at Menoufia University Hospital and the commissioning period at Shebin El-Kom Hospital, became a resident at Menoufia University Hospital in 2016, completed the residency in 2019, and is now a lecturer and specialist at the Pediatrics and Neonatology Department, Menoufia University Hospitals and Faculty of Medicine. Qualifications include an MBBCh (Bachelor of Medicine and Surgery, Menoufia University, 2013), an MSc in Pediatric and Neonatology Medicine (Menoufia University, 2019), a Professional Diploma in Pediatric Clinical Nutrition (National Nutrition Institute, Cairo, 2022), and an MD in Pediatric and Neonatology Medicine (Menoufia University, 2025).



Fortunate Madondo

University of Hertfordshire, United Kingdom

Ecological determinants of neonatal and pediatric health in Epworth, Zimbabwe

Neonatal and pediatric health outcomes in peri-urban informal settlements are shaped by complex, interrelated ecological factors. This study examines how economic hardship, early pregnancies, and survival-driven transactional sex influence child health outcomes in Epworth, Zimbabwe, using Bronfenbrenner's ecological systems theory as an analytical framework. A qualitative case study design involving 10 participants was employed to capture lived experiences of young mothers and caregivers. At the microsystem level, poverty and limited parental support contribute to early pregnancies and reduced capacity to access healthcare. At the mesosystem level, weak linkages between families, schools, and health services hinder effective health education and service utilisation. Exosystem influences include high unemployment rates and limited access to adolescent-friendly reproductive health services, increasing vulnerability to risky behaviours. At the macrosystem level, entrenched socio-cultural norms, gender inequalities, and economic instability perpetuate cycles of poverty, affecting maternal and child health outcomes. Findings indicate increased risks of low birth weight, preterm births, and childhood malnutrition, compounded by inconsistent antenatal care attendance. Despite these challenges, community-based interventions and informal support networks demonstrate potential for improving outcomes. The study concludes that addressing neonatal and pediatric health disparities in Epworth requires integrated, multi-level interventions that address both structural inequalities and healthcare access. An ecological approach provides a comprehensive framework for designing contextually relevant and sustainable health interventions in marginalized urban settings.

Keywords: Neonatal Health, Pediatric Care, Ecological Systems Theory, Poverty, Early Pregnancy, Transactional Sex, Zimbabwe, Urban Health, Social Determinants of Health.

Biography

Dr Fortunate Madondo is a Senior Lecturer and Programme Leader in Early Childhood Education at the University of Hertfordshire with extensive experience in teaching, research, and external examining in higher education. Madondo's work focuses on holistic child development, with a particular emphasis on promoting equitable and inclusive outcomes for young children, and research interests centre on social justice in education, exploring how wider social, cultural, and environmental factors shape children's learning and development. Madondo draws significantly on Bronfenbrenner's ecological systems theory, as well as social constructivist perspectives, to inform teaching, research, and engagement with students and practitioners, and is committed to supporting trainee educators to critically engage with theory and practice, fostering reflective and creative approaches to early childhood education.



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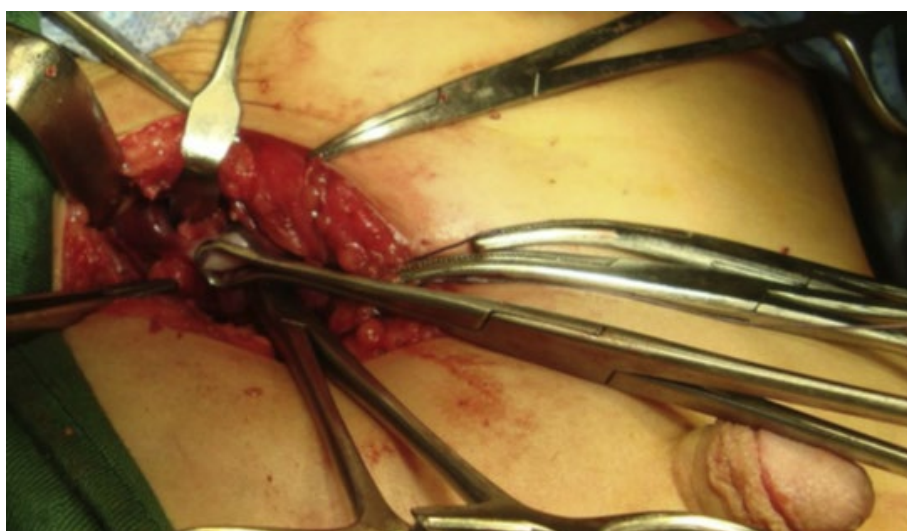
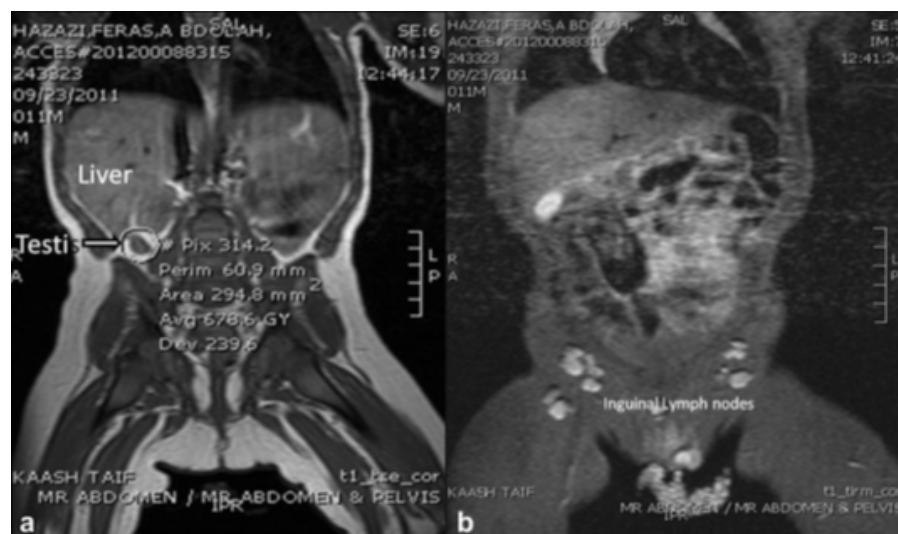
Hepato-testicular fusion: A rare case of undescended testis

Fusion of the undescended testes with splenic, renal and adrenal tissue have been described in several cases but hepato-testicular fusion is a very rare entity of undescended testes. Herein, we report a case of hepato-testicular fusion. To the best of our knowledge, this is the 2nd such case in the English literature.

Case Report: A 14 month-old boy was referred from primary health care center to our outpatient clinic with history of empty right hemi-scrotum since birth. On examination, the right hemiscrotum was undeveloped and the right testis was impalpable. The left testis was normally descended and of average size. An abdominal examination was otherwise unremarkable. Scrotal ultrasound showed that the left testicle was seen in left hemiscrotum with no hydrocele. It was normal in shape and of good size. The right testicle was not visualized neither intra-abdominal nor in the inguinoscrotal region. For further assessment with MRI. MRI of the pelvis and abdomen for undescended testis showed empty right hemiscrotum and right inguinal canal. There was a well circumscribed hyper intense structure seen in T2WI measuring 4 × 5 mm which may represent the right testis at the right inguinal region. The left testis was seen in left scrotum. Also, bilateral inguinal lymph nodes. Complete blood count, chemistry and hepatorenal function were normal. Laparoscopic orchiopexy was planned. But initial examination under general anesthesia (according to our protocol) showed palpable nubbin high in the inguinal region, so formal inguinal exploration was done initially which revealed no testicular tissue. The wound was extended laterally. The vanishing testicular vessels and vas were then traced along the lateral abdominal wall until an atrophic (4 mm) testis was seen attached to the inferio-lateral aspect of the right lobe of the liver. Orchidectomy was then performed and sent for histopathology. Microscopy showed an immature testicular

tissue composed of small seminiferous tubules lined by polyhedral to cuboidal cells with no evidence of spermatogenesis. The tubules were disposed into mildly edematous fibrous stroma. Leydig cells were not recognized. In one focus within the epididymis keratinous cyst, composed of stratified squamous epithelial cells replacing normal duct lining and the cavity filled up with squames (keratin flakes). There was no definite glycogen deposit within the seminiferous tubule cells (PAS stain). No evidence of malignancy.

Discussion: Fusion of the undescended testes with splenic, renal and adrenal tissue have been described in several reports. In 1996, Ferro et al. described a heterotopic liver tissue adherent to the upper pole of the testis as an incidental finding at herniotomy. They attributed the presence of heterotopic liver tissue in testis to the trapping of hepatocyte aggregates in the area of peritoneum where the testis is developing. In 2012, Fan et al. observed a spermatic cord-like structure was connecting the liver and right testis in a 3-month-old boy at right inguinal hernia repair. The hepatic tissue was present along the entire length of this structure. In this report the testis was not directly attached to the liver but in case the testis was directly attached to the inferio-lateral aspect of the right lobe of the liver. In 2001, Lund et al. described an atrophic (4 mm) testis which was attached to the inferio-lateral aspect of the right lobe of the liver. Such anatomical association is similar to our case. They stated that their case was the first one in English literature. So our case is the 2nd such case in the English literature.



Conclusion: Fusion of the testis to liver either directly or via a cord-like structure is a very rare cause of cryptorchidism and the young pe-diatric surgeon should be aware of it as a one of etiological factors of undescended testicle.

Keywords: Hepato-Testicular Fusion, Hepato-Gonadal Fusion, Undescended Testicle.

Biography

Professor Gamal Al-Saied completed a Bachelor's in Medicine and Surgery from Al-Azhar University, ranking 9th in the graduating class, earned a Master's degree in pediatric surgery in 1991, followed by a Doctorate in Pediatric Surgery (M.D.) in 1998. Al-Saied's academic progression includes positions as demonstrator (1992), assistant lecturer (1993), lecturer, and assistant professor (2004) at Al-Azhar University's Pediatric Surgery Department, achieving full professor status in 2009, and holds certifications as Fellowship of European Board in Pediatric Surgery (2008) and Fellowship of American College of Surgeons (2022). Al-Saied's scholarly work encompasses two published theses, supervision of multiple graduate students, 37 international research publications in pediatric surgery journals, and one textbook chapter on urethroplasty, and has served as an international speaker, conference chairperson, editor-in-chief for two pediatric surgery journals, and editor for thirteen additional journals. Al-Saied founded the pediatric surgery unit at King Abdul Aziz Specialist Hospital in Taif, Saudi Arabia in 2003.



Michael Ginzburg*, Rachel White

University of California Davis Healthcare System, Department of Physical Medicine and Rehabilitation Therapies, Orthotics & Prosthetics Division, United States

Scoliosis care: Where anatomy and psychology intersect

Background: At the time of the intake, the patient was a 14-year-old Risser 1 female at the 91st percentile for height, presenting with a 39 degree thoracic curve spanning T5-T12 with an apex at T5 and 29 degree lumbar curve spanning T12 to L4 with an apex of L2, complicated by pelvic obliquity. She has been previously diagnosed with ASD, ADHD-predominantly inattentive subtype, MDD, and GAD and has experienced involuntary psychiatric hospitalization, partial hospitalization programs, and intensive outpatient programs. Prior to her engagement with Orthotics, the patient had been very actively participating with pediatrics, orthopedics, physical therapy, psychiatry, and outpatient psychotherapy in addition to specialized care/advocacy services geared toward the neurodivergent population. The patient has been described as slow to warm up to providers, with her treatment compliance questioned. Scoliosis bracing has been resisted by the pt until the curvature has progressed to approaching the surgical magnitude.

Theoretical Orientation: This case was approached from the biopsychosocial theory perspective.

Methods: In the context of a high magnitude double curve, full-time bracing was indicated and prescribed. University of Iowa Children's Hospital prediction guideline indicated a 33% chance of curve progression with 18 hour wear protocol. The patient was engaged with a strength-based approach utilizing Motivational Interviewing techniques with both intervention design and cosmetic finishing options collaboratively devised. The definitive orthosis designed was a Rigo-Cheneau variant with a trochanteric extension, axillary extension, lumbar derotation pad, thoracic pad. The pt was prepared for the orthosis to include a compliance monitor and the patient assented to the use of the monitor. The orthotic care was supplemented with psychosocial considerations: the patient was connected to ScoliosUs

journaling and peer support resources. For additional normalization, the patient's plush teddy bear was also fit with a similar profile 'brace' with an identical cometic transfer. The patient was scheduled to a greater frequency of follow-up than is routine to allow for modifications and patient empowerment. The treating orthotist has maintained contact and treatment coordination with the prescriber and the PT so patient's challenges could be addressed quickly and effectively, fostering a sense of empowerment and agency and reinforcing the belief that the care providers care for the patient.

Results: The pt has been wearing the TLSO for approximately 8 months. She has had outstanding engagement with the orthotist, keeping 4 follow-up appointments with one additional televisit and 0 cancellations or unkept visits. The installation of the compliance monitor was initially delayed due to unrelated logistics, and the wear-and-tear of the padding and the Velcro strapping supported patients' reported wear time. The pt was excited to have the monitor installed so her compliance is documented and supported.

During her treatment, the patient experienced a growth spurt, increasing her height from 91st to 95th percentile with an increase of the thoracic curve to 42 degrees. This was distressing to the pt and she quickly scheduled an additional follow-up with the orthotist when her treatment plan was collaboratively updated with contingency planning also taking place. It appears important to recognize that during her TLSO treatment time, the pt did experience an Emergency Room psychiatric evaluation with a concern for danger to self. Despite these challenges and stressors, patients' bracing compliance and engagement with the treating orthotist has been exemplary.

Conclusions: Treatment compliance for adolescents diagnosed with scoliosis is a very well-documented and notorious challenge. Inattention, hyperactivity, habit orientation, helplessness, hopelessness, and social exclusion seen in psychiatric diagnoses relevant to this case can make these difficulties more intense. Simultaneously, integrated, Humanistic and attentive care can overcome these challenges.

Treatment Recommendations: Supplementation of behavioral health principles to physical medicine conservative scoliosis care is emphatically recommended for both neurodivergent and neurotypical children and adolescents. Normalizing/de-stigmatizing, empowering, and Rogerian Client-Centered/Humanistic strategies may offer outsized benefit.

Future Research Advocacy: The impact of a scoliosis diagnosis on the behavioral health/quality of life of both the patients and their families may clarify challenges experienced by those diagnosed and those who care for them. The role of psychotherapy, peer support, and journaling in scoliosis care remains understudied.

Biography

Michael Ginzburg is a Certified Orthotist by the American Board of Certification in Orthotics, Prosthetics and Pedorthics, a Licensed Clinical Psychologist by the California Board of Psychology and a Licensed Marriage and Family Therapist by the California Board of Behavioral Sciences. Ginzburg is fascinated by the mind-body phenomenon and the intersection of physical medicine and behavioral health.



Michael S. Ginzburg*, Rachel E. White

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Early predictors of orthotic effectiveness for full-time scoliosis TLSO cases

Scoliosis is a tri-planar condition of the spine that often requires multidisciplinary conservative outpatient treatment. The medical and allied health clinicians involved have their own workflows, schedules, concerns, and logistics with the patients and their families greatly benefiting from coordination of care. The fit of a scoliosis orthosis is considered successful for full-time wearers when 50% of the Cobb angle is reduced by the orthosis, requiring the wearers to undergo radiological evaluation after the orthotic fitting takes place. When the desired in-brace correction is not achieved, the patients face additional follow-ups with the treating orthotist, additional radiology with corresponding radiological exposure, costs, and stressors. The increased need for follow up may strain the therapeutic alliance between the orthotist and the patient and/or between the orthotist and the remainder of the treatment team. A promising strategy to best determine the effectiveness of orthotic fit prior to advancing the patient to radiology was proposed by Courtney et al. Our investigation aimed at replicating the results reported with additional control of variables based on the knowledge gained from the 2022 findings.

Biography

Michael Ginzburg is a Certified Orthotist by the American Board of Certification in Orthotics, Prosthetics and Pedorthics, a Licensed Clinical Psychologist by the California Board of Psychology and a Licensed Marriage and Family Therapist by the California Board of Behavioral Sciences. Ginzburg is fascinated by the mind-body phenomenon and the intersection of physical medicine and behavioral health.



Muhammad Waqas Anwar

University Hospitals of Leicester, England, United Kingdom

Optimizing neonatal jaundice pathways: Improving timely referral for home phototherapy using rapid bilirubin testing

Background: Neonatal jaundice remains one of the most common conditions requiring postnatal monitoring and treatment. Home-based phototherapy has increasingly been implemented within community neonatal services in the National Health Service as part of expanding Hospital at Home models of care. Effective implementation of these pathways depends on timely bilirubin assessment to support prompt clinical decision-making. Although laboratory serum bilirubin remains the reference standard recommended by the National Institute for Health and Care Excellence, regional neonatal jaundice pathways emphasize rapid point-of-care testing to facilitate early treatment decisions and timely referral for home phototherapy. In our neonatal service, delays in referral were observed due to reliance on laboratory bilirubin results, resulting in missed treatment windows, avoidable hospital admissions, and increased parental anxiety.

Aim: To evaluate implementation of a regional neonatal jaundice pathway recommending point-of-care bilirubin testing for infants eligible for home phototherapy and to introduce targeted interventions to improve timely referral and treatment initiation.

Methods: A retrospective quality improvement evaluation was conducted in a district neonatal service. Eligible neonates were defined as clinically stable infants ≥ 35 weeks' gestation, birth weight > 2 kg, and appropriate postnatal age (> 24 hours if ≥ 37 weeks or > 72 hours if < 37 weeks). Data were collected using a structured proforma including demographics, timing and modality of bilirubin measurement, bilirubin values, and time intervals from testing to treatment decision and referral.

Interventions included:

Multidisciplinary teaching sessions for neonatal and postnatal teams

Visual clinical pathway reminders in key areas

Digital communications to reinforce pathway awareness

Concurrently, a service evaluation assessed correlation between point-of-care gas bilirubin and laboratory serum bilirubin to support clinician confidence. A second audit cycle (June–July 2025) evaluated the impact of these interventions.

Results: Eighteen neonates met eligibility in the first audit cycle; 56% received point-of-care testing. Gas bilirubin strongly correlated with serum bilirubin ($r>0.9$), confirming reliability. Post-intervention, point-of-care testing compliance increased to ~80%, enabling faster treatment decisions and timely referrals for home phototherapy. Clinicians reported improved confidence in rapid testing, and service feedback indicated smoother workflow and reduced parental anxiety.

PROBLEM	INTERVENTION	OUTCOME
Delayed referral Lab bilirubin use Missed treatment windows	Treatment sessions Pathway posters Digital reminders Gas bilirubin validation	56% → 80% POC testing Faster referral Improved pathway

Conclusion: Low-cost, targeted interventions substantially improved adherence to the neonatal jaundice pathway, increasing point-of-care testing from 56% to 80%. This facilitated timely clinical decisions, enhanced access to home phototherapy, and supported family-centered care. The approach represents a scalable model for optimizing neonatal jaundice management, reducing avoidable hospital admissions, and strengthening community-based phototherapy services.

Biography

Dr. Muhammad Waqas Anwar is a Paediatric Trainee in the East Midlands, England, and has completed the Membership of the Royal College of Paediatrics and Child Health (MRCPCH). Anwar's research interests focus on paediatric and neonatal education, has authored three publications addressing common health problems in children, and continues to be actively involved in research and training aimed at improving paediatric healthcare and medical education.



**Muhammad Waqas Anwar*,
Kaycee Ayeni, Ehiomen Ikhayere,
Emilia Ababio**

University Hospitals of Leicester, United Kingdom

Every minute matters: Reducing system delays in antibiotic delivery for suspected neonatal sepsis in a tertiary neonatal network

Background: Neonatal sepsis is a time-critical condition in which delays in antibiotic administration are associated with increased morbidity and mortality. Guidance from the National Institute for Health and Care Excellence and the British Association of Perinatal Medicine recommends intravenous antibiotics within one hour of clinical decision (golden hour). This audit evaluated compliance with this standard and identified key points of failure within a tertiary neonatal network.

Methods: A retrospective audit was conducted over two months (November-December 2025). All neonates commenced on intravenous antibiotics for suspected sepsis were identified using the electronic clinical record system (BadgerNet) and cross-checked with drug administration records. Recorded timepoints included sepsis screening, clinical decision-to-treat, antibiotic prescription, and administration. The primary outcome was antibiotic delivery within 60 minutes of decision. Secondary analysis examined decision-to-prescription and prescription-to-administration intervals to identify bottlenecks. Descriptive statistics and subgroup analysis by clinical area were performed. Early Plan-Do-Study-Act interventions targeted escalation pathways and prescribing workflow reliability.

Results: Twenty-six neonates met inclusion criteria. Overall compliance with the golden hour standard was 65.4% (17/26); 34.6% (9/26) received antibiotics beyond one hour. In delayed cases, the mean time for antibiotics was 3.2 hours, with a maximum delay of 13.5 hours. In delayed cases, the dominant bottleneck occurred between clinical decision and antibiotic prescription, accounting for 22% of total median delay in delayed cases. Compliance varied

across clinical areas, from 40% on the tertiary neonatal unit (reflecting higher clinical acuity and workflow intensity) to 66.7% in its affiliated regional neonatal unit.

Conclusion: Most neonatal sepsis delays occur after recognition, driven by prescribing and workflow failures rather than diagnostic delays. These findings identify a modifiable patient safety risk. Targeted quality improvement interventions have been implemented to improve golden hour compliance. Marked inter-ward variation highlighted inconsistent escalation processes, suggesting that standardised sepsis pathways and prescribing prompts may reduce delays and improve treatment.

Biography

Muhammad Waqas Anwar is a Paediatric Trainee at University Hospitals of Leicester NHS Trust, UK, involved in the delivery of acute and general paediatric care across both tertiary and secondary care settings. Anwar's clinical interests include neonatology, patient safety, and quality improvement, with a focus on optimising system-based care and reducing delays in emergency treatment, and is also engaged in teaching, multidisciplinary teamwork, and service development within paediatrics.



Muhammad Tahir Nadeem

DHA Hospital, Lahore, Pakistan

Current challenges and future directions in neonatal care in developing countries

Neonatal health continues to be a major public health priority worldwide, particularly in developing countries where healthcare resources are often limited. Despite significant advances in neonatal medicine, neonatal mortality and morbidity remain substantial challenges due to prematurity, birth asphyxia, neonatal infections, and inadequate access to specialized care.

This presentation reviews the current challenges affecting neonatal outcomes and discusses practical strategies that can improve newborn survival and quality of care. Particular emphasis is placed on early identification of high-risk neonates, timely referral systems, infection prevention measures, breastfeeding support, and family-centered care practices.

Evidence from various healthcare settings indicates that strengthening neonatal intensive care services, improving healthcare worker training, and increasing parental awareness can significantly reduce preventable neonatal complications. In addition, the integration of standardized clinical protocols and continuous monitoring systems has shown positive effects on patient safety and treatment outcomes.

The presentation also highlights the importance of multidisciplinary collaboration among pediatricians, neonatologists, nurses, and community healthcare workers. Such collaboration contributes to more effective management of neonatal conditions and promotes continuity of care after hospital discharge.

Furthermore, emerging technologies, telemedicine support, and digital health solutions are creating new opportunities to improve neonatal care delivery, particularly in resource-constrained regions.

In conclusion, improving neonatal outcomes requires a comprehensive approach involving healthcare infrastructure development, professional training, community engagement, and evidence-based clinical practice.

Biography

Dr. Muhammad Tahir Nadeem is an MBBS graduate with postgraduate training in Pediatrics from Armed Forces Medical College, Rawalpindi, with extensive clinical experience in child health and pediatric care. Nadeem's professional interests include neonatal medicine, preventive pediatrics, and healthcare quality improvement, and actively participates in scientific and academic activities related to child healthcare and medical education.



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Weight awareness among parents and health care providers in Sharjah, UAE

Background: This study looks at weight perception among parents and health care providers in Sharjah, UAE.

Methods: This study was done through reviewing 1000 patients files who visited the paediatric OPD in University Hospital Sharjah (UHS) during 2015. The files were reviewed for the cause of the visit, the diagnosis of weight status and weight counselling.

Results: 18% of study patients were either overweight or obese. In children with abnormal weight status, the cause of the visits was weight related in 3.3% of patients, while it was due to weight unrelated causes in 96.7%. Weight counselling in obese individuals were reported in 35.5% of obese patients. While in overweight group, weight counselling was found in 5% of the patients and in patients with normal BMI, counselling was done in 0.2% of patients.

Conclusions: This study shows clear defects in weight awareness and perception in parents and health care providers. Most parents are either not aware about the weight status of their kids or they don't consider overweight or obesity as medical issues that require medical advice. The very low percentage of specific weight counselling shows weight counselling is not practiced if these patients are evaluated for other complaints. Weight misperception among parents and health care providers can be genuine barriers for prevention of childhood obesity.

Keywords: Children, Obesity, Parents, Physicians, Weight Awareness.

Biography

Dr. Naguib is a Consultant Pediatrician and Pediatric Diabetologist with a strong academic and clinical background, specializing in managing pediatric obesity and childhood diabetes using advanced therapies such as insulin pumps and continuous glucose monitoring. Abdelreheim plays an active role in education and clinical training at the University of Sharjah and leads continuing medical education efforts at University Hospital Sharjah.



Navid Mirzakhani Araghi

University of Tehran, Tehran, Iran

Translation and psychometric properties of the autism screening instrument for educational planning 3 in Persian (Farsi)

Introduction: Autism spectrum disorder is a neurodevelopmental disorder that restricts participation in normal life activities. A critical challenge is the early identification and intervention of children with autism spectrum disorder, which is essential for enhancing the quality of life. This study aimed to translate and establish the reliability and validity of the autism screening instrument for educational planning 3 for children with autism spectrum disorder.

Method: The participants were 60 children aged 2–13 years and 11 months with autism spectrum disorder. Face validity, content validity (CVR/CVI), convergent validity with the GARS2, internal consistency, test-retest, intra-rater, and inter-rater reliability of the Autism Screening Instrument for Educational Planning 3 were measured.

Results: The impact score was above 1.5 for the face validity. The CVI score was higher than 0.79, and the CVR score exceeded 0.31. The correlation between the Autism Screening Instrument for Educational Planning 3 and the GARS2 sections was all above $r=0.70$. For the Autism Behavior Checklist, the internal consistency was 82.2, $p<0.05$, and the Intraclass Correlation Coefficient (ICC) was 0.91, for all sections of the ASIEP-3. The intra-rater and inter-rater reliability were above 0.79 ($ICC>0.70$).

Conclusion: Autism Screening Instrument for Educational Planning 3 has good psychometric properties for children aged 2–13 years and 11 months with ASD and can be utilized in clinical practice.

Biography

Navid Mirzakhani holds a doctorate in child psychology and serves as an Associate Professor, having worked in occupational therapy and research at the faculty for over 25 years, focusing on skill development and scholarly publication. Mirzakhani has authored more than 90 research articles and 45 books, and maintains research interests in child health, sensory processing, and interdisciplinary studies.



Nguyen Tien Dung

Bach Mai Hospital and Thang Long University, Hanoi, Vietnam

Acute respiratory tract infections in children – From recommendations to practice in Vietnam and worldwide

Acute respiratory infections are the leading group of diseases with the highest morbidity and mortality rates in children under 5 years of age in low- and lower-middle-income countries, particularly pneumonia. Community-Acquired Pneumonia (CAP) in children is caused by a variety of etiology, including viruses and bacteria. These causes are related to the child's age. The most common causative bacteria are *S. pneumoniae*, *H. influenzae*, *S. aureus*, *Streptococcus spp* and *M. pneumoniae*. Currently, antibiotic resistance of these bacteria is increasing. There are many guidelines on diagnosis, management, and treatment CAP in children, including recommendations of which case require hospitalization and which case can be treated as outpatient, and use appropriate antibiotics. However, for various reasons, adherence rates to these guidelines remain low, leading to unnecessary hospitalizations and improper antibiotic use. These are the main points of this presentation, based on scientific reports from Vietnam, as well as from other countries around the world.

Biography

Honorary Professor, California International University, USA; Reviewer of the American Journal of Pediatrics; Member of the World Pediatric Respiratory Society; Vice President of the Vietnam Pediatric Respiratory Society; Senior Lecturer of Thang Long University; Former Head of the Pediatrics Department, Bach Mai Hospital. Nguyen has attended many conferences in Vietnam and around the world in the roles of attendee, chair and speaker. Nguyen's research interests are respiratory diseases in children such as respiratory tract infections, asthma, emergency, and pediatric and neonatal ICU.



**Ning Ma *, Jiao Yang, JingYa Li,
Rui Juan Su, Xin Zhang, Yan Sun,
Guo-Wen Liu**

Cardiac Center, Beijing Children's Hospital, Capital Medical
University, National Center for Children's Health, Beijing,
China

Summary of diagnostic experience for anomalous origin of the coronary arteries

Objective: To summarize the diagnostic experience of echocardiography in pediatric patients with Anomalous Origin of the Coronary Arteries (AOCA), with a focus on identifying characteristic imaging features, analyzing the causes of missed diagnosis, and exploring strategies to improve diagnostic accuracy.

Methods: Clinical data of children diagnosed with AOCA at Beijing Children's Hospital were retrospectively reviewed. The study primarily covered two subtypes: Anomalous Left Coronary Artery from the Pulmonary Artery (ALCAPA) and Anomalous Aortic Origin of a Coronary Artery (AAOCA). Echocardiographic manifestations, initial diagnostic results, imaging findings from supplemental modalities, and the diagnostic process were systematically analyzed. Missed diagnosis rates and underlying reasons were also evaluated.

Results: Echocardiography achieved high diagnostic accuracy for ALCAPA, with characteristic findings including left ventricular dysfunction, marked dilation of the right coronary artery, abnormal retrograde flow signals within the pulmonary artery, and collateral circulation between the coronary arteries. In contrast, the detection rate for AAOCA was substantially lower. Missed diagnoses in AAOCA were primarily attributed to nonspecific clinical presentations, insufficient attention to the aortic root anatomy, and failure to identify the abnormal origin and interarterial course of the anomalous coronary artery. In AAOCA cases where diagnosis was established, echocardiography often revealed an oval-shaped orifice or slit-like ostium at the anomalous origin, as well as an oblique course between the aorta and pulmonary trunk. Exercise-induced chest pain or syncope in these patients served as important clinical clues suggesting high-risk anatomical variants. Additional

imaging modalities, including cardiac computed tomography angiography (CTA) or magnetic resonance imaging, were frequently required to confirm the diagnosis and delineate the precise course of the anomalous vessel, particularly in AAOCA.

Conclusion: Echocardiography remains the first-line screening tool for AOCA, demonstrating excellent performance in ALCAPA detection. However, its diagnostic value for AAOCA is limited, and a high index of suspicion combined with systematic evaluation of the coronary ostia and proximal course is essential to reduce missed diagnoses. When echocardiographic findings are equivocal or high-risk features are suspected, prompt integration of cross-sectional imaging techniques is strongly recommended to ensure timely and accurate diagnosis.

Biography

Dr. Ma Ning graduated from Capital Medical University with a doctor's degree in cardiovascular imaging. Ninga worked in the Beijing Children's Hospital, Capital Medical University, National Center for Children's Health. Ninga served as the director of the cardiac ultrasound department of the heart center, obtained the position of chief physician, professor. Ninga has published more than 30 papers in SCI and national core journals, charged over 5 projects of the National Natural Science Foundation of China, Natural Science Foundation of Beijing and other funds.



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Development and external validation of a prediction model for intracranial complications in term neonates with bacterial meningitis

Objectives: Neonatal Bacterial Meningitis (NBM) is a severe invasive infection of the central nervous system and a leading cause of early-life mortality and long-term neurodevelopmental impairment. Although its case-fatality ratio has declined over time, the burden of mortality and neurologic morbidity remains substantial. Survivors often face persistent developmental deficits and increased healthcare utilization. This study aimed to develop and externally validate a clinical prediction model based on routinely available clinical indicators for early identification of term neonates with bacterial meningitis at high risk of imaging-defined intracranial complications, thereby enabling targeted neurological surveillance and timely imaging follow-up.

Methods: This retrospective two-center study included term neonates with bacterial meningitis who remained hospitalized for at least 14 days. Thirty prespecified predictors available within the first three days after symptom onset were evaluated. Predictor stability was assessed within a leakage-controlled resampling framework, six algorithms were compared using identical validation partitions, and the external cohort remained isolated until the development procedure and final model were frozen.

Results: The development cohort included 565 infants, of whom 138 (24.4%) developed imaging-defined complications; the external cohort included 102 infants, with 28 (27.5%) events. The final model included cerebrospinal fluid white blood cell count, altered muscle tone, hypotension requiring vasoactive support, gaze deviation, seizure, and C-reactive protein. Nested validation of the complete development procedure yielded an AUROC of 0.806, a Brier score of 0.137, and a calibration slope of 0.838. Conditional on the final predictor set, logistic regression had the lowest log loss and Brier score, and no complex algorithm provided a consistent overall advantage. External validation yielded an AUROC of 0.637, a Brier score of 0.233, and a calibration slope of 0.286.

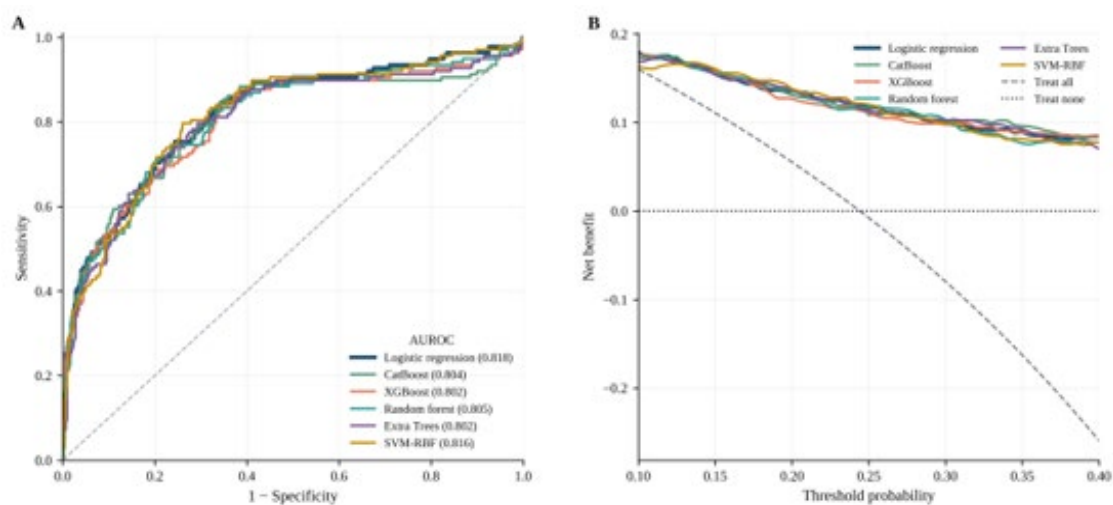


Figure 1. Internal discrimination and clinical utility of the six candidate prediction models conditional on the final predictor set.

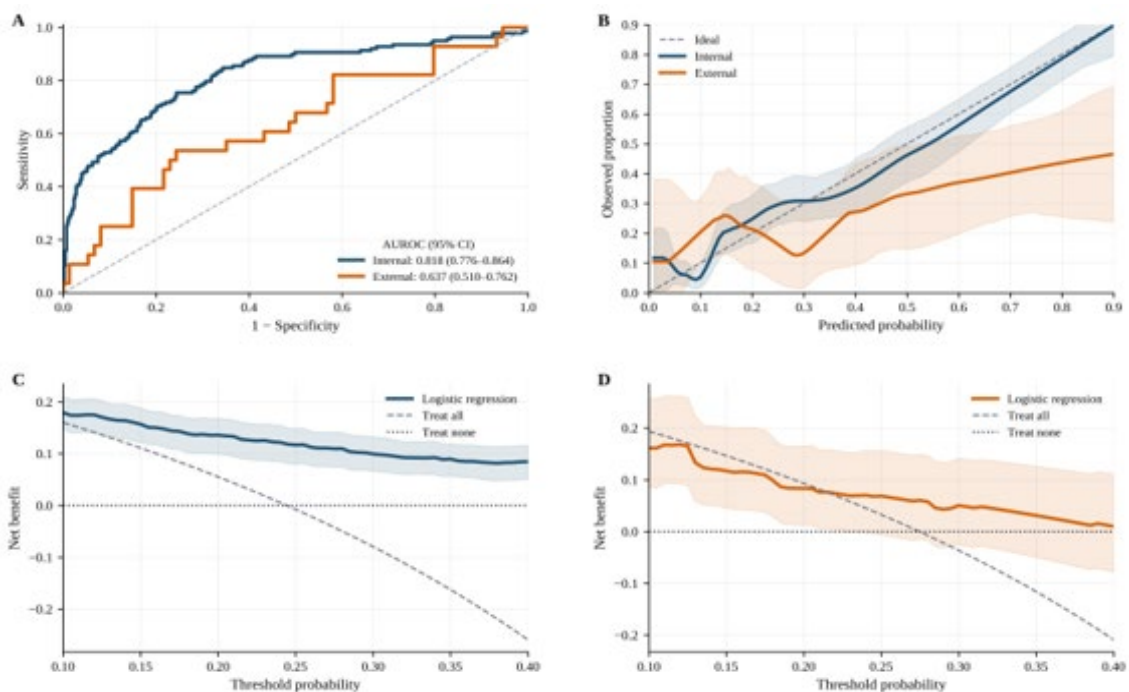


Figure 2. Internal and external validation of the final logistic regression model.

Conclusions: The six-predictor logistic regression model summarized clinically coherent early prognostic information, but external discrimination was modest and calibration was poor. It should be considered a candidate framework for multicenter validation and independently evaluated updating rather than a model ready for individual clinical decision-making.

Biography

Qianyu Cheng is an undergraduate student in Measurement and Control Technology and Instrument at the School of Information Science and Technology, Beijing University of Technology. Cheng's research interests centre on mathematics, statistics, and machine learning, and Cheng has undertaken various machine-learning projects across diverse domains, receiving awards in mechanical engineering innovation and mathematical modelling. Cheng co-authored a paper in *Measurement* on a magnetostrictive guided-wave cloud monitoring system for long-term pipeline experiments, and was responsible for data analysis and processing.



Rohit Kumar

James Cook Hospital, University Hospital of Tees NHS Trust,
Cleveland, England, United Kingdom

If in doubt, choose change

Antibiotics are administered to many preterm newborns and to a substantial proportion of term infants in the hours after birth due to risk for early-onset sepsis. The approaches taken to determine which newborns should be evaluated for early-onset sepsis, and what type and duration of antibiotics are administered, are important elements of neonatal antibiotic stewardship.

Probable bacterial infection is defined as the presence of maternal risk factors or clinical symptoms and elevated inflammatory parameters (C reactive protein ≥ 10 mg/L or elevated procalcitonin concentrations according to the postnatal age-related nomogram) despite blood culture negativity.

Amongst this cohort, i.e. management of neonates at risk of early onset sepsis, this is also the biggest group of babies with extended length of antibiotic administration and duration of hospitalization. This talk aims to address the controversies surrounding the duration and choice of route of administration of antibiotics.

Biography

Rohit Kumar is a consultant neonatologist working in a tertiary referral center, the clinical lead for Risk management and Infectious disease, and the Neonatal Representative to the Regional Transfusion Medicine Committee, Preterm Birth and Intrapartum Care Group. Kumar has regularly presented at various international conferences, published in reputed peer-reviewed journals, and for the last decade has been part of the organizing committee hosting the Annual International Neonatal Conference in Middlesbrough.



Santosh Kumar Mishra

SNDT Women's University (Retired), India

Air pollution as contributing factor for respiratory disorders among infants

Despite the fact that breathing clean air is a basic human right, air pollution (defined as contamination of the indoor or outdoor atmosphere by harmful substances) has become a major global threat to human health and well-being.

Poor air quality has impact on respiratory disorders (conditions that affect the airways, lungs, and the respiratory system, disrupting normal breathing) among infants and new-born babies (of up to 1 year of age). One of the hazardous effects of air pollution is diseases of various types, including respiratory illness. The author of this abstract argues that air pollution impairs, to a considerable extent, respiratory health among infants and children. The resulting outcomes are:

Acute Lower Respiratory Infections (ALRI); bronchitis [inflammation of airways, causing them to swell and produce excess mucus (a sticky substance that is produced in the nose), which leads to coughing, wheezing (whistling sound produced during breathing due to narrowed or inflamed airways), and breathing difficulties)]; and reduced lung function development.

Prime objective of this research work is to present scientific discussion on effects of air pollution on respiratory disorders (illness) among infants. Secondary data (collected from books, book chapters, journal articles, etc.), largely 'qualitative' in nature, have been used. In terms of research methodology, method of data analysis is 'descriptive'. In addition, this work also benefitted from author's interactions with health providers during international conferences (held in USA, Ireland, Vietnam, Sweden, etc.).

Analysis of data indicates that pollutants (especially in cities and towns in countries with large population base) trigger inflammatory responses in the airways, predisposing infants to pneumonia (common respiratory infection that causes inflammation in one or both lungs) and acute bronchiolitis. Air pollution poses a major threat to respiratory health of not only infants, but also among men and among of all age groups, across the regions of the globe. However, infants are more vulnerable to air pollution due to their (a) developing immune/respiratory systems, and (b) underdeveloped lungs. Exposure to pollutants, resulting from human-induced activities, during infancy is directly related to higher rates of breathing difficulties. Infants exposed to poor air quality are often confronted with wheezing, asthma, chronic cough, and severe respiratory distress, especially increased hospitalizations for bronchitis.

In terms of air pollutants, it is pertinent to note that indoor air pollution originate from cooking and heating devices, tobacco smoking, plastic and wood particles, etc. Outdoor air pollution, on the other hand, derives mostly from vehicular traffic, industrial waste, wild fire events, and dust storms. Also, with poor ventilation in the household, air quality is unsatisfactory. With regard to extent of impact, the health risks varies in different geographical regions, depending on source of air pollution, and duration of exposures.

This research work briefly concludes that poor air quality is a global issue which threatens the respiratory health of infants globally. Exposure to pollution substances and environmental hazards are risks of respiratory diseases. There is, thus, need for prompt intervention for improving air quality to decrease the incidence of respiratory diseases among infants.

Keywords: Air Pollution, Infants, Respiratory Disorders, Acute Lower Respiratory Infections (ALRI), Bronchitis, Chronic Coughing, Pneumonia, Lung Function.

Biography

Dr. Santosh Kumar Mishra is an Independent Researcher (Scholar), having retired from the Population Education Resource Centre, Department of Lifelong Learning & Extension, S.N.D.T. Women's University, Mumbai, India. Mishra underwent training in demography and acquired a Ph.D., and has authored 6 booklets, 4 books, 31 book chapters, 109 journal articles, 2 monographs, 7 research studies, and 119 papers for national and international conferences (some with bursary). Mishra has been awarded a Certificate of Excellence in Reviewing in 2017, 2018, 2021, 2022, and 2024, and conferred with an Excellence of Research Award for outstanding contribution and recognition in the field of agriculture in 2021.



Santosh Kumar Mishra

SNDT Women's University (Retired), India

Management of pediatric health care policies: Case study of Belgium

Envisaging preventive strategies into pediatric care is key to better child health outcomes. In this context, it is pertinent to note that pediatric health care (a field of medical specialty focusing on the health of individuals from birth until the age 18 or 21 years) has evolved with many innovations. Such developments have resulted in prevention of life-threatening illness and overall health promotion among infants and children. It is because of these considerations that the Government of Belgium has devised and implemented appropriately designed pediatric health care policies.

This research aims to give an insight into relevant aspects of management of pediatric health care policies in Belgium. As such, this work is case study in nature. Secondary data (collected from books, book chapters, journal articles, etc.), largely 'qualitative' in nature, have been used. In terms of research methodology, method of data analysis is 'descriptive'. In addition, this work also benefitted from author's interactions with health providers during international conferences (held in USA, Tajikistan, Turkey, Ireland, Vietnam, Sweden, etc.).

Analysis of data indicates that Belgium provides free and subsidized health care to all children (up to 18 years) of parents with Belgian Government health insurance. This institutional mechanism aims to cover the costs of having a baby, and enables parents to access free early-years health care for their children. In terms of management strategies, it has been found that children's health care support is provided by regional agencies. In the Dutch-speaking Flemish region, for instance, Kind en Gezin (Child and Family) offers support to families with children aged 0-3 years. Further, French-speaking Wallonia and Brussels are cared for by ONE (Office of Birth and Children) to children until the age of 6 years. The ONE, with its central location in

Brussels, is a public institution that develops birth and childhood policies. It creates, develops, adapts, and publishes a wide range of brochures and posters about child development. Furthermore, in the German-speaking areas of Belgium, Kaleido Ostbelgien (KO) provides support for the healthy development of children and young people aged 0–20. These (three) regional agencies refer parents to family doctors and also specialist. However, in case of minor illnesses, parents can take children to general practitioners.

Importantly, apart from initiatives by the Belgium Government, there exists private health care for kids and children. Despite public health insurance in place, many Belgian residents use private health care in order to access a wider selection of services and reduce waiting times. This is accessible in Belgium through private health insurance. This management aspect of health care enables parents in the country to access private doctors and hospitals not included in state coverage. In addition, Belgium residents are entitled to use private health insurance for covering the costs not reimbursed through public insurance.

This abstract briefly concludes that the Government of Belgium has taken a leading role in preserving health of children. It has been possible due to sustained efforts, including contributions of health care providers in the private sector and the international agencies.

Keywords: Pediatric Health Care, Management, Policies, Belgium, General Practitioners, Public Health Insurance, Private Health Care Providers.

Biography

Dr. Santosh Kumar Mishra is an Independent Researcher (Scholar), having retired from the Population Education Resource Centre, Department of Lifelong Learning & Extension, S.N.D.T. Women's University, Mumbai, India. Mishra underwent training in demography and acquired a Ph.D., and has authored 6 booklets, 4 books, 31 book chapters, 109 journal articles, 2 monographs, 7 research studies, and 119 papers for national and international conferences (some with bursary). Mishra has been awarded a Certificate of Excellence in Reviewing in 2017, 2018, 2021, 2022, and 2024, and conferred with an Excellence of Research Award for outstanding contribution and recognition in the field of agriculture in 2021.



Gül Ülker Kara, Selim Öncel*, Hatice Sınav-Ütkü

Department of Pediatrics and Child Health, Section of Internal Medical Sciences, Kocaeli University Faculty of Medicine, Kocaeli, Turkey

The impact of a multiplex PCR-Based Blood Culture Identification Panel (BCID2) on the management of sepsis in a pediatric population

Background: Rapid identification of pathogens in pediatric sepsis is critical for optimizing antimicrobial therapy and improving outcomes. This study aimed to evaluate the clinical impact of the multiplex PCR-based BioFire® Blood Culture Identification 2 (BCID2) Panel on the management of septicemia in children.

Methods: This retrospective cohort study was conducted at a university hospital in Türkiye. The study group included 38 pediatric patients (0-18 years) with positive blood cultures analyzed with the BCID2 Panel alongside conventional methods. The control group consisted of 38 historical patients for whom only conventional methods were used. We compared the time to pathogen identification, impact on antimicrobial therapy modification, antimicrobial therapy duration, and 30-day mortality between the groups.

Results: The mean time to final pathogen identification was approximately 57.5 hours shorter with the BCID2 Panel compared to conventional culture (45.0 vs 102.5 hours), although this difference was not statistically significant in our sample ($p=0.241$). In the study group, empirical antimicrobial therapy was modified in 55.3% of patients based on BCID2 results. A significant association was found between the detection of *Acinetobacter baumannii* by the panel and subsequent therapy modification ($p=0.029$). While the overall diagnostic agreement between BCID2 and culture was high (98%), significant discrepancies were noted in the detection of antimicrobial resistance genes, particularly for carbapenemases like KPC ($p<0.01$). There was no significant difference in the total duration of therapy or 30-day mortality between the groups (15.8% vs. 13.9%, $p>0.05$).

Conclusion: The BCID2 Panel significantly reduces the time to pathogen identification in pediatric sepsis, enabling earlier, targeted therapeutic adjustments. However, its limitations in detecting all relevant phenotypic resistance mechanisms underscore the continued necessity of conventional culture and susceptibility testing for comprehensive antimicrobial stewardship.

Biography

Born in Ankara in 1967, Selim Öncel graduated from Ankara University Faculty of Medicine, completed a pediatrics residency in 1997, family medicine residency in 1999, and pediatric infectious diseases fellowship in 2006. Joining Kocaeli University, Öncel became associate professor in 2013 and professor in 2023, and holds a Hospital Infection Control Physician certificate. A student of composer Ertuğrul Oğuz Fırat, Öncel represented Turkey at the Eurovision Song Contest 2000 with Grup SOS and performed in various choirs, holds Aikikai 2nd Dan, hosts a weekly radio program on Radyo Kİ, and speaks English, French, and German.



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⁶ISPM (International Society for Personalized Medicine), Japan

⁷PMC (Personalized Medicine Coalition), Washington, USA

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Bringing the promise of Personalized and Precision Medicine (PPM) to rare and orphan disorder care: How to use the latter to revolutionize pediatric services

The greatest challenge of Personalized and Precision Medicine (PPM) is to optimize pre-early (subclinical) diagnostics, predictive and prognostics procedures, and to identify curative therapies for every disease in a personalized way so that every individual gets benefit. To that

end, however, we need fully understand mechanisms of disease that will drive the design of novel therapies and innovative approaches.

Diagnosing rare and orphan diseases is an extremely challenging task, and success will depend on innovative and biodesign-inspired approaches, global and transdisciplinary data sharing, monitoring of outcomes linked to precision therapeutics, and tight collaboration with patient advocacy groups.

With the emergence of PPM-driven technologies and its focus on customizing treatment to individual patients and tracing diseases back to their root molecular cause, it may be possible to reduce the time to diagnosis for rare conditions, enabling identification and intervention at earlier and pre-earlier (subclinical) stages of the rare or orphan disease. Moreover, identifying treatments for rare and orphan disorders is also challenging due to a limited understanding of disease mechanisms, small cohort sizes, inter-individual symptom variability, and little commercial incentive to develop new diagnostic and predictive modes, and targeted or smart treatments.

Meanwhile, genome profiling can detect a broad range of genetic aberrations in rare conditions including those in non-coding region. Recent breakthroughs in advanced gene and cell therapies have potentially provided the first treatments for some rare diseases. Some of these approvals were highly controversial, as were their huge costs.

For rare diseases that have not yet been characterized, the undiagnosed period can be even longer. Even when a diagnosis has been made, therapeutic options are often limited. And since the majority of rare diseases are hereditary and/or genetic in origin, and advances in genomic sequencing tools and technologies have really driven an increase in the identification of rare disorders. A key challenge of rare diseases is the time required for diagnosis.

In rare diseases, OMICS-based and IT-supported diagnoses reveal valuable information about the cause of symptoms, disease progression, familial risk, and in certain cases, unlock access to targeted therapies. In particular, genomic profiling can detect a broad range of genetic aberrations including those in noncoding regions, producing comprehensive data that can be periodically reanalyzed for years to come when further evidence emerges. Indeed, targeted drug development and repurposing of medicines can be accelerated as more individuals with rare diseases receive a molecular diagnosis. Multidisciplinary teams in which clinical specialists collaborate with geneticists, genomics education of professionals and the public, and dialogue with patient advocacy groups are essential elements for the integration of PPM into clinical practice worldwide. Paired with the development of techniques for identifying biomarker-driven targeted therapeutics, that understanding becomes the first step toward another major milestone: being able to pharmacologically influence the activity of any gene in the human genome.

In this context, let me stress the importance of some approaches in treating: (i) Pompe disease with recently developed replacement enzyme (rhGAA) and (ii) spinal muscular atrophy (SMA) with antisense oligonucleotides, demonstrating compensating effect for the deficiency in survival motor neuron (SMN) protein via gene therapy or other genetic manipulation. Among the latest and design-inspired examples of cell and gene-based therapies are also the intramuscular gene therapy of lipoprotein lipase deficiency (LLD) and hematopoietic stem cell gene therapy for adenosine deaminase deficiency (ADD).

The discovery of therapeutic targets by rare disease research is not only the basis for studies that aim to cure these patients, but provides the inspiration to target pathognomonic Achilles heels in more common disorders. So, the future of rare disease treatment lies in the ability to harness genetic insights for the development of targeted therapies, ensuring that advancements in medical science translate into accessible, effective care for all patients. This shift not only signifies a transformation in drug development but also a recommitment to patient-centric healthcare, where treatments are as unique as the individuals they aim to heal.

The development and availability of the above-mentioned drugs have revolutionized the landscape of rare disease treatment, offering new possibilities and presenting unique challenges for pharmaceutical companies, healthcare providers, and patients alike. For instance, gene and cell-based therapies offer potential cures for rare genetic disorders by modifying or replacing faulty genes. PPM-driven medicines, on the other hand, aim to tailor treatments based on an individual patient's genetic makeup, ensuring maximum efficacy and minimal adverse effects. Additionally, the advent of PPM, taking into account various factors such as genetic, environmental, and lifestyle influences, holds great potential in advancing treatment options for rare diseases. So collaborations among stakeholders, including pharmaceutical companies, researchers, patient advocacy groups, and regulatory agencies, play a crucial role in driving future innovation and development. By combining resources, knowledge, and expertise, these collaborations have the power to accelerate progress in rare disease treatment, ultimately benefiting patients worldwide.

And in the years to come, the development of effective, safe, and affordable new treatments for rare diseases will require coordinated involvement of all relevant stakeholders, from patients and their families and associations to other funders, researchers, pharmaceutical companies, clinicians, and governments.

Biography

Dr Sergey V. Suchkov, MD, PhD, was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, Suchkov graduated from Astrakhan State Medical University and was awarded an MD; in 1985, maintained a PhD as a student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology; and in 2001, maintained a Doctor Degree at the National Institute of Immunology, Russia. From 1989 through 1995, Suchkov was Head of the Laboratory of Clinical Immunology, Helmholtz Eye Research Institute in Moscow, and from 1995 through 2004 a Chair of the Department for Clinical Immunology, Moscow Clinical Research Institute (MONIKI); in 1993-1996, was Secretary-in-Chief of the Editorial Board of Biomedical

Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK. At present, Suchkov is Professor in Medicine & Immunology and Director for the Center for Biodesign at the N.D. Zelinskii Institute for Organic Chemistry of the Russian Academy of Sciences, Moscow, R&D Director of InMedStar (Russia-UAE), and a member of numerous international bodies including the Russian Academy of Natural Sciences, the New York Academy of Sciences, the American Chemical Society, the American Heart Association, AMEE, EPMA, ARVO, ISER and the Personalized Medicine Coalition.



Sobia Tabbusum*, Irfan Habib

ChildLife Foundation, Pakistan

Transient tachypnea in term newborn: Predictors of poor outcome in a tertiary care hospital emergency room

Objective: To determine the frequency of predictors which are related to poor treatment outcomes in term newborns presenting with Transient Tachypnea during the first 24 hours of birth in the Emergency Department of a Tertiary Care Hospital.

Background: Maternal history of diabetes or asthma, cesarean delivery, low birth weight, male gender, and a poor APGAR score have all been associated with a poor prognosis for TTN treatment.

Study Design: Cross sectional study.

Place and Duration of Study: Neonatal Intensive Care Unit at Emergency Department of Tertiary Care Hospital, Karachi from January to December 2021.

Methodology: A total of 163 newborns with Transient Tachypnea of Newborns of 37-41 weeks were included. After enrolment, the relevant information about demographic data and the predictors of poor outcomes of TTN were recorded.

Results: Mean maternal age was 27.14 ± 3.29 . Mean gestational age was 37.54 ± 1.09 weeks. Out of the 163 neonates, 112 (68.71%) were male and 51 (31.29%) were females. The mean weight of neonate was 2.93 ± 0.42 kg. Poor outcome was seen in 54 (33.13%) neonates. The frequency of predictors was found to be male gender in 112 (68.71%), low birth weight i.e. <2.5 kg in 19 (11.66%), maternal history of asthma in 04 (2.45%), infant of diabetic mother in 33 (20.25%), nulliparity in 50 (30.67%), cesarean delivery in 114 (69.94%) and low APGAR score in 14 (8.59%) neonates.

Conclusion: This study has shown that the poor outcome 33.13% neonates with male gender, cesarean delivery, and nulliparity are the most common predictors which are related to poor treatment outcome in term newborns presenting with tachypnea within 24 hours of life.

Keywords: Transient Tachypnea of Newborn, Male Gender, Cesarean Delivery, Outcome.

Biography

Dr. Sobia Tabbusum is a Pediatrician with an M.B.B.S and M.C.P.S and 18 years of experience. Tabbusum is a member of the Pakistan Medical and Dental Council (PMDC), the Pakistan Pediatric Association (PPA), and the Pakistan Pediatrics Society of Emergency Medicine (PSEM). A proactive Pediatrician who likes to raise awareness about medical issues and uses writing as a main medium, Dr. Sobia Tabbusum has had posters published at the Emirates Society of Emergency Medicine (ESEM) in 2019, 2020, 2021, 2022 and 2023, has given several poster presentations at the PPA and won prizes, and presented at APCP 2025. Tabbusum is currently practicing as a Pediatrics Consultant at Burhani Hospital, Karachi, Pakistan.



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Neonatal sepsis and early neurodevelopmental outcomes in Nepal

Neonatal sepsis remains a critical public health concern in low- and middle-income countries such as Nepal, where limited neonatal care resources and delayed diagnosis contribute to significant morbidity. Although survival rates have gradually increased with improvements in neonatal intensive care, the long-term neurodevelopmental consequences among survivors remain insufficiently explored. This study aims to assess early neurodevelopmental outcomes in infants with documented neonatal sepsis and emphasize the need for structured follow-up and early intervention to reduce developmental impairments.

This ongoing prospective cohort study includes neonates diagnosed with both culture-positive and culture-negative sepsis admitted to two level III neonatal intensive care units (NICUs) in Nepal. A total of 395 infants have been enrolled, with 241 completing the 6-month follow-up and 157 completing assessments at both 6 months and 1 year. Data collection includes socio-demographic characteristics, maternal education, prenatal factors such as maternal infections, IntraUterineGrowthRestriction(IUGR), and fetal distress, as well as neonatal clinical variables including assisted ventilation and complications. Neurodevelopmental evaluations were performed using the Developmental Assessment Scale for Indian Infants (DASII), validated by the Nepal Health Research Council (NHRC).

At six months, 16.6% of infants demonstrated motor delay, 14% exhibited mental delay, and 30.6% showed overall developmental delay. By one year, developmental delays decreased to 13.4% for motor, 5.1% for mental, and 18.5% overall. Identified protective factors included prenatal vitamin supplementation (AOR: 0.186), culture-negative sepsis (AOR: 0.137), and gestational age ≥ 37 weeks (AOR: 0.116). Pregnancy-induced hypertension emerged as a significant risk factor, increasing the likelihood of motor delay at one year (AOR: 3.125).

These findings highlight that a substantial proportion of neonatal sepsis survivors experience early neurodevelopmental delays, particularly within the first six months of life. Although improvements are observed by one year, the presence of persistent delays reinforces the need for comprehensive developmental monitoring, timely screening, and structured interventions in resource-limited settings. Tailored follow-up programs, caregiver education, and integrated early childhood services can significantly enhance developmental outcomes for this vulnerable population.

Keywords: Neonatal Sepsis, Neurodevelopment, Developmental Delay, Infant Health, Low- and Middle-Income Countries (LMICs).

Biography

Dr. Swechhya Vaidya earned a medical degree from Dhaka University, Bangladesh, and completed a Master of Public Health with a focus on clinical medicine, child health, and preventive medicine. Vaidya is currently a PhD scholar in Medical and Health Sciences under a sandwich program at the Amrita Institute of Medical Sciences and Research Center, India, and serves as an Assistant Professor in the Department of Community Health Science at the Patan Academy of Health Sciences (PAHS), School of Medicine/Public Health. Vaidya has published a PhD study protocol on neurodevelopmental outcomes in infants with neonatal sepsis.



Umashankar Palanisamy

Sudha Mother and Child Care Hospital, India

Perforated Meckel's diverticulitis in an extremely preterm, very low birth weight infant

Background: Meckel's diverticulum is an uncommon cause of intestinal perforation in extremely preterm and very low birth weight (VLBW) infants and may clinically mimic spontaneous intestinal perforation or necrotizing enterocolitis.

Case Presentation: A male infant was delivered by emergency lower-segment caesarean section at 28 weeks of gestation for severe fetal growth restriction with worsening placental resistance and progressive reduction followed by reversal of end-diastolic flow on antenatal Doppler studies. The infant was extremely preterm, VLBW and IUGR, with a birth weight of 780 g. He was managed on CPAP and passed urine and meconium within the first 24 hours. Minimal enteral feeding was initiated on day 2 of life with 1 mL feeds, which were gradually increased to 2 mL. Subsequently, the infant developed progressive abdominal distension. Abdominal radiography demonstrated multiple air-fluid levels with pneumoperitoneum, raising suspicion of intestinal perforation. In view of the clinical and radiological findings, emergency exploratory laparotomy was performed.

Operative Findings: Laparotomy revealed a perforated Meckel's diverticulum with features of diverticulitis. The remaining bowel appeared grossly normal, with no evidence of extensive bowel necrosis or other perforations. Segmental resection of the diverticulum was performed followed by primary ileo-ileal anastomosis.

Conclusion: Perforated Meckel's diverticulitis is a rare but important differential diagnosis of intestinal perforation in extremely preterm and VLBW infants. Although the clinical and radiological presentation may mimic spontaneous intestinal perforation or necrotizing

enterocolitis, careful intraoperative evaluation can establish the diagnosis. Early recognition and prompt surgical intervention may allow bowel preservation and successful management even in an extremely low birth weight infant.

Biography

Dr. Umashankar Palanisamy is a dedicated Consultant Paediatric Surgeon with specialized training in Paediatric Surgery and experience in managing surgical conditions affecting infants, children, and adolescents. Palanisamy completed his M.B.B.S. from Rajah Muthiah Medical College and Hospital, Chidambaram, followed by M.S. in General Surgery from Meenakshi Medical College & Research Institute, Kanchipuram, and M.Ch. in Paediatric Surgery from Coimbatore Medical College Hospital under The Tamil Nadu Dr. M.G.R. Medical University. Palanisamy has prior experience as a Senior Resident and Assistant Professor of General Surgery. Palanisamy professional interests include minimally invasive and advanced paediatric surgical procedures. Dr. Umashankar has presented over 50 seminars and several papers and posters at national conferences, including PESICON and NEPSCON. Palanisamy received First Prize for Paper Presentation at PESICON 2024 and has contributed to several academic publications.



V. Sivaprakasam

Nataraja Children's Hospital & Child Development Centre,
Chidambaram, India

Communication Observation Card (COC): A community-based tool for early identification of autism spectrum disorder and other neurodevelopmental disorders before two years of age

Background: Autism Spectrum Disorder (ASD) and other Neuro Developmental Disorders (NDDs) are important causes of childhood disability worldwide. Early identification during the first two years of life enables timely intervention and improves developmental outcomes. However, developmental surveillance remains challenging in low-resource settings due to the lack of simple, practical, and scalable screening tools. COC was developed as a milestone-based surveillance tool utilizing five key communication milestones that can be monitored by HCP.

Objectives: To evaluate the feasibility and effectiveness of the Communication Observation Card (COC) for community-based identification of Autism Spectrum Disorder and other neurodevelopmental disorders in children younger than two years of age.

Methods: A prospective community-based developmental surveillance programme was conducted in Kumaratchi Block, Cuddalore District, Tamil Nadu, India, from December 2025 to May 2026. Fifty-six Anganwadi workers and primary healthcare workers were trained to use the Communication Observation Card, which incorporates five age-specific communication milestones: social smile (2 months), eye-to-eye contact (2–4 months), response to name (7–12 months), pointing to an object with one finger (7–15 months), and use of two meaningful words (12 months). Children demonstrating delay or absence of one or more milestones were referred to a monthly developmental assessment clinic conducted by a Developmental Paediatrician at the PHC. Data were collected using standardized Google Forms. Feasibility and user

acceptability were assessed through structured digital questionnaires completed by frontline workers.

Results: The total population of children aged 12–24 months in Kumaratchi Block was 1,985. During the study period, 850 children (42.8%) underwent developmental surveillance using the Communication Observation Card. Fifty children (5.9% of those screened) were identified with suspected neurodevelopmental concerns and referred for specialist evaluation. The mean age at referral was 16 months. Following developmental assessment, 30 children (60% of referrals; 3.5% of screened children) were diagnosed with Autism Spectrum Disorder. Among children with ASD, 18 (60%) were male and 12 (40%) were female. Ten children with neurodevelopmental disorders were identified before 18 months of age. Among the remaining children, diagnoses included Global Developmental Delay (n=8), Down syndrome (n=5), Motor Developmental Delay (n=5), and Undiagnosed Genetic/Neurodevelopmental Syndromes (n=2). All referrals originated from Anganwadi workers trained in the use of the COC. Of the 56 workers trained, 32 (57.1%) completed the feasibility survey. All respondents (100%) reported that the COC was easy to understand, simple to administer, and feasible for incorporation into routine community-based developmental surveillance.

Conclusions: The Communication Observation Card (COC) is a simple, low-cost, and feasible community-based developmental surveillance, can be effectively implemented by Anganwadi and healthcare workers. The COC enabled early identification of Autism Spectrum Disorder and other neurodevelopmental disorders before two years of age and demonstrated excellent acceptability among frontline workers. Integration of COC-based developmental surveillance into routine child health services may strengthen early detection pathways, facilitate timely referral, and improve access to early intervention in resource-limited settings.

Biography

Dr. V. Sivaprakasam, MD, DCH, PGDN, PGDAP, FIAP, is a Consultant Developmental and Adolescent Pediatrician and Director of Nataraja Children's Hospital & Child Development Centre, Chidambaram, India. With over 44 years of pediatric experience and more than 30 years in developmental pediatrics, Sivaprakasam's work focuses on early identification of autism, dyslexia, ADHD, and developmental disorders. Sivaprakasam developed the IAP Immunization and Developmental Card, the Tamil Nadu Dyslexia Screening Checklist, and the Communication Observation Card (COC Card), authored the Upgraded Parenting and Child Development Booklet for parents, and has trained over 1,000 doctors through DAME (Developmental Assessment Made Easy) workshops. Sivaprakasam is a former President of IAP Tamil Nadu and recipient of six major national and state awards for pediatric and community service contributions.



W.A.S. Saroja Weerakoon

Faculty of Indigenous Medicine, University of Colombo,
Sri Lanka

National Ayurveda Hospital, Colombo, Sri Lanka

Ayurvedic perspectives on prevention and management of childhood emotional and behavioral disorders

Child mental health is essential for emotional regulation, social interaction, learning capacity, and overall wellbeing. Childhood emotional and behavioral disorders are increasingly recognized as major public health concerns worldwide, affecting children's academic performance, family relationships, and social functioning. Although occasional impulsive or defiant behavior is considered a part of normal child development, persistent disturbances may indicate underlying psychological and behavioral disorders requiring early intervention.

This study aimed to evaluate the role of Ayurveda in the prevention and management of childhood emotional and behavioral disorders through a review of classical Ayurvedic concepts and contemporary literature. According to Ayurveda, the causative factors for such disorders can originate during preconception (Garbha Purva Nidana), prenatal (Garbha Kaleena Nidana), perinatal (Prasava Kaleena Nidana), and postnatal (Prasavoththara Nidana) stages, influencing both physical and psychological development of the child.

The findings of the study revealed that Ayurvedic preventive and therapeutic approaches such as Sadvritta (good conduct), Achara Rasayana (ethical lifestyle practices), Satvavajaya Chikitsa (psychotherapy/mind-control therapy), Yoga, meditation, Medhya Rasayana drugs, and selected Panchakarma procedures may positively influence emotional stability, attention, social behavior, and stress management in children. Furthermore, healthy parenting practices and lifestyle modifications were identified as important supportive measures in improving children's behavioral wellbeing.

The study concludes that Ayurveda provides a holistic and preventive framework for promoting child mental health and managing emotional and behavioral disorders. Early Ayurvedic interventions focusing on psychological balance, moral values, and healthy lifestyles may contribute to improved quality of life among children and their families.

Keywords: Ayurveda, Child Mental Health, Emotional and Behavioral Disorders, Satvavajaya Chikitsa, Yoga, Medhya Rasayana.

Biography

Dr. W.A.S. Saroja Weerakoon is a Grade I Senior Lecturer in Ayurveda Pediatrics at the Faculty of Indigenous Medicine, University of Colombo, Sri Lanka, and also serves as an Ayurvedic Consultant Pediatrician at the National Ayurveda Hospital, Colombo, Sri Lanka. Weerakoon completed a Master's Degree in Ayurveda Pediatrics at the University of Colombo and obtained a PhD from the Faculty of Medical Sciences, University of Sri Jayawardenepura, Sri Lanka. As both a clinician and academic researcher, Weerakoon is actively engaged in strengthening research competence in Ayurveda and the Traditional Medical System in Sri Lanka, with scholarly contributions including publications in indexed, peer-reviewed journals and several academic books in the field of Ayurveda and pediatric health. Weerakoon's primary research interests focus on the bioactivities of indigenous medicines and pediatric-related disorders, including cerebral palsy, Autism Spectrum Disorders, Attention Deficit Hyperactivity Disorder (ADHD), and muscular dystrophies.



Xin Zhang^{1*}, Jing Wang², Fangyun Wang¹, Ning Ma¹, Pei Li¹, Qun Wu¹

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Artificial Intelligence assisted diagnosis and treatment of congenital heart disease

Congenital Heart Disease (CHD) is a prevalent condition affecting infants and children worldwide, and it is the most common type of birth defect in China. But the shortage of pediatric doctors and the uneven distribution of medical resources in China have led to the lack of an effective screening system for CHD. As a result, many CHD patients cannot receive timely diagnosis and treatment, which significantly affects the quality of the population and increases social healthcare costs. In response to this situation, we rely on new artificial intelligence technology to tailored to our national conditions. Specifically, we propose that CHD screening should be carried out by primary care physicians in community hospitals who are responsible for routine physical examinations using AI-assisted CHD ultrasound model, thereby helping to prevent and control CHD in China. To alleviate this problem in our CHD diagnosis task, the Depth-wise Separable Convolution (DSC) is adopted to largely reduce the network parameters. The decision is based on five views, which can incorporate more complementary information than a single view-based diagnosis. However, this also introduces the challenge of information fusion. A five-channel CNN, as shown in this figure, is developed to take the concatenated matrix as input. Since keyframe selecting always costly, the automatic analysis of multi-view videos in an end-to-end fashion is necessary when large scale samples are collected. Therefore, we propose to investigate the possible deep aggregation frameworks for our video-based multi-view 2D echocardiogram analysis. The basic idea is to assign a larger weight for the more important frame in the diagnosis procedure. In addition to using deep learning models to assist with early screening and diagnosis of CHD, we are also committed to using deep learning models to assist in developing clinical management plans for CHD. We developed a novel deep learning-based AI model (deep keypoint stadiometry, DKS) to localize the endpoints of defects, i.e.,

keypoint of CHD, in multiview Echo accurately and therefore differentiate the transcatheter or surgical closure following the explicit expert knowledge-based clinical rules. To sum up, our researches indicate that the short-term automated machine learning process can partially replace and promote the long-term professional training of primary doctors, improving the primary diagnosis rate of CHD in China, and laying the foundation for early diagnosis and timely treatment of children with CHD.

Biography

Dr. Zhang Xin graduated from Capital Medical University with a master's degree in pediatrics cardiovascular and a doctor's degree in cardiovascular imaging. Zhang Xin worked in the Beijing Children's Hospital, Capital Medical University, National Center for Children's Health. Zhang Xin served as the deputy director of the cardiac ultrasound department of the heart center, obtained the position of chief physician, associate professor. Zhang Xin has published more than 20 papers in SCI and national core journals, charged over 5 projects of the National Natural Science Foundation of China, Natural Science Foundation of Beijing and other funds.



Maria Cristina Gallup, Kathryn Hutchins, Gina Rohlik, Tammy Schultz, Raymond Stetson, Yu Kawai*

Mayo Clinic Children's, Rochester, Minnesota, United States

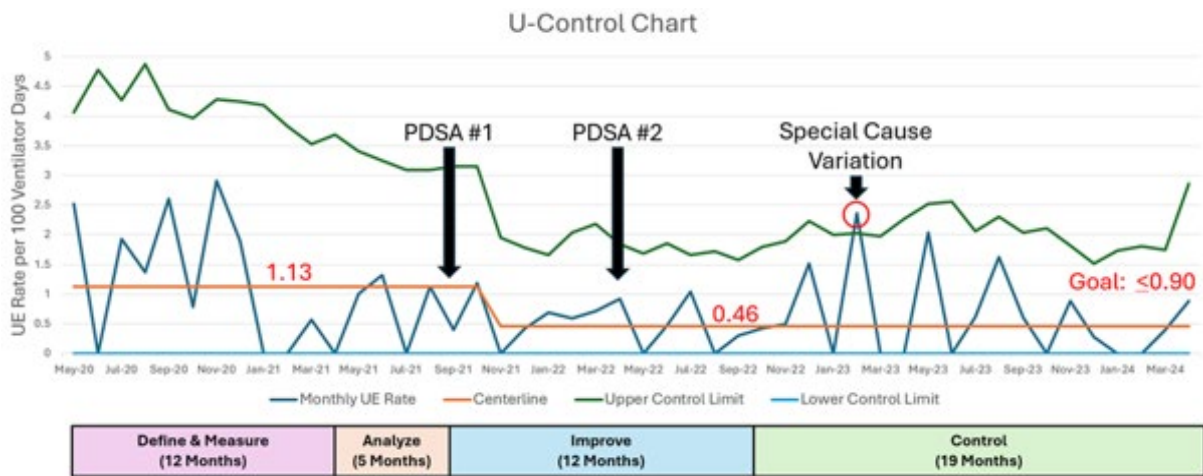
Multidisciplinary QI collaboration in decreasing pediatric unplanned extubation

Introduction: Unplanned Extubations (UE) are common, preventable adverse events in the neonatal and pediatric intensive care units that can cause serious complications. Risk factors include inadequate sedation, poor ETT securement, clinician inexperience, and high staff workload. Quality improvement strategies, like the Solutions for Patient Safety (SPS) UE bundle, can help reduce UE rates.

Methods: A multidisciplinary team used the Define, Measure, Analyze, Improve, and Control (DMAIC) framework to decrease the UE rate to ≤ 0.90 events per 100 ventilator days within 12 months, without significantly increasing the incidence of ETT-related pressure injuries. This aim aligned with SPS's goal of ≤ 0.95 UE events per 100 ventilator days.

Results: The baseline UE rate over 12 months was 1.13 events per 100 ventilator days ($n=1410$ total ventilator days). The first intervention implemented the UE bundle via the K-Card over 6 months and performed compliance audits, reducing the UE rate to 0.63 ($n=1277$ total ventilator days, 61% bundle compliance). The second intervention introduced the UE apparent cause analysis (ACA) huddle over a second 6-month period, further reducing the UE rate to 0.44 ($n=1590$ total ventilator days, 94% bundle compliance, 86% ACA huddle compliance). One month after the first intervention, a centerline shift in the U-Control chart set a new baseline UE rate of 0.46 ($n=1734$ total ventilator days) over eight months. During the Control phase, the UE rate was sustained at 0.46 ($n=3588$ total ventilator days) for 19 months. Post-intervention, five ETT-related pressure injuries were noted, resulting in an incidence rate of 1.4%, compared to 0.7% in the pre-intervention period.

Conclusions: Implementing the UE bundle via the K-Card and standardizing the ACA huddle process at the bedside reduced UE events in Mayo Clinic's neonatal and pediatric ICUs without significantly increasing the ETT-related pressure injury incidence rate. Ongoing education and staff engagement are essential for sustaining these improvements.



Biography

Dr. Yu Kawai is an assistant professor at the Mayo Clinic College of Medicine and is the Quality Medical Director and an intensivist in the Pediatric ICU and the Pediatric Cardiothoracic Surgery ICU. Kawai is the co-chair of the American Delirium Society (ADS) Pediatric Delirium Special Interest Group and an active member of the ADS Education Committee, locally leads the Pediatric Sepsis, Delirium, Mobility, and Sedation Teams, and also engages in numerous multidisciplinary QI projects, including efforts to reduce unplanned extubations, CLABSI, and other iatrogenic conditions.

8TH EDITION OF

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HYBRID EVENT

28-30
SEPTEMBER 2026

POSTER PRESENTATIONS





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Cranial ultrasound and magnetic resonance imaging predict the outcome in hypothermia treated newborns with neonatal encephalopathy in the clinical routine

Background and aims: Perinatal asphyxia and neonatal encephalopathy remain leading causes for mortality and morbidity, urging markers of neurodevelopmental outcome in Hypothermia-Treated (HT) newborns. This study evaluated whether established clinical parameters and neuroimaging within two weeks after birth predict the neurodevelopmental outcome in HT newborns.

Methods: Observational retrospective study of HT newborns from three neonatal centers in 2012-2017 in Munich, highest level of care. The relationship between Apgar-score, umbilical cord blood pH, Cranial Ultrasound (cUS) or Magnetic Resonance Imaging (cMRI) with the outcome was assessed using Fisher's exact test. Subgroups were compared using Mann-Whitney U-Test.

Results: Outcome data from 3 to 24 months were available in 40/56 HT newborns (mean gestational age: 39,4 weeks; in n=21 clinical assessments, in n=15 Münchener Funktionelle Entwicklungsdiagnostik, in n=4 Bayley tests). Neither the 10 min Apgar-score $\leq$ 5 (n=26/52) nor the umbilical cord pH<7,0 (n=21/56) correlated with asphyxia-related abnormalities in the neuroimaging or clinical outcome. The 1 min Apgar-Score tended to be lower in HT newborns

with unfavorable outcome ($p=0.08$; mean 1.3 ± 2.8 versus 2.0 ± 2.3). In HT newborns with unfavorable outcome, the rates of severe pathological findings in cUS ($p=0.04$, $n=3$ vs. 0 patients) and cMRI ($p=0.007$, $n=3$ vs. 0 patients) were significantly higher. Brainstem, cerebellum, basal ganglia, and thalamus were affected more often in HT newborns with unfavorable outcome ($p=0.03$).

Conclusion: cUS and cMRI can predict unfavorable outcome in HT newborns instead of APGAR score or umbilical cord pH. Prospective studies with standardized long-term follow-up are required to improve the prognostic value of specific lesions in neuroimaging.

Biography

Caterina Lapegna was born in Bolzano, Italy, completing primary and secondary education there and graduating with highest honors from Liceo Classico Giosuè Carducci in 2013. Lapegna studied Medicine at Ludwig Maximilian University of Munich and the Technical University of Munich, graduating in 2020 after passing the German State Examination, then undertook residency training in Neurology at Munich Clinic Bogenhausen and Munich Clinic Harlaching, followed by a rotation in Psychiatry and Psychotherapy at LMU University Hospital. Lapegna recently started residency training in General Practice and is a native speaker of German and Italian with professional proficiency in English.



Isabella Booth*, E Turner, J Basavaraju

Whiston Hospital, Mersey and West Lancashire NHS Trust,
United Kingdom

Antenatally detected urological abnormalities: A single-centre audit of guideline compliance with postnatal follow-ups

Background: Timely postnatal imaging and prophylactic antibiotics are essential in reducing renal injury and long-term morbidity of antenatally detected urological abnormalities. This audit assessed compliance with three standards: i) appropriate scan request timing; ii) scan completion within recommended timeframes and iii) antibiotic prophylaxis (where indicated) against Regional Guidelines of Alder Hey Hospital.

Methods: A retrospective audit was conducted of neonates undergoing renal tract ultrasound within the first two months of life at Whiston Hospital over 27 months (January 2024 to March 2026). Patients were identified through radiology records, with clinical data collected from electronic records.

Results: 78 neonates with antenatally diagnosed urological anomalies underwent imaging. 77% of requests were made within the correct timeframe, whilst 16.7% had no timeframe specified and 6.4% contained incorrect requests. Amongst the urgent cases, 11/13 scans were completed within 72 hours and two were delayed until days 13 and 85 of life. Of 65 non-urgent cases, only 19% were completed within the recommended <14 days. 20% had their scan by 28 days, 61% of scans were delayed beyond 28 days. 14 patients (18%) met criteria for prophylactic antibiotics. 12 of them received appropriate antibiotics. Three patients with significant abnormalities had no documented prescription, while medication records were unavailable in two cases.

Conclusion: Compliance with Regional guidelines were sub-optimal across all domains. Urgent scans were generally completed promptly once identified. Non-urgent imaging delays and under-prescribing of prophylactic antibiotics were common. Dedicated radiology slots have been introduced alongside recommendations for mandatory protocol labelling and antenatal scan review at NIPE (Newborn and Infant Physical Exam) to address limitations and improve service delivery. Re-audit with closure of audit loop is planned in near future.

Biography

Isabella Booth is currently working as a resident clinical fellow with interests in education and paediatrics. This project was undertaken during Booth paediatrics rotation, and Booth is working towards applying to formal paediatric training.



K. Bowler*, N. Gulati, E. Crawley, S. Castaldi, H. Century, D. Iyamabo

Neonatal Intensive Care Unit, Luton and Dunstable University Hospital, Luton, United Kingdom

Umbilical cord sampling: Innovative method to reduce blood transfusions in premature infants

Background: Preterm neonates have a critically small circulating blood volume of 85–90 mL/kg. Early admission phlebotomy removes a significant proportion of this volume. Umbilical Cord Sampling (UCS) in place of admission phlebotomy is a practical blood-conservation strategy that preserves blood volume during neonatal transition. In premature and very low birth weight neonates, it has been associated with more stable blood pressure, a reduction in the use of vasopressors, fewer transfusions, and a reduced risk of intraventricular hemorrhage. UCS is supported by the American Academy of Pediatrics however is not yet widely practiced in the UK.

Aim: To evaluate whether implementing UCS for neonates born at less than 32 weeks gestation in a UK tertiary neonatal unit reduces transfusion rates in the first week of life.

Methods: Following staff training and the introduction of pre-prepared sampling packs at preterm deliveries, clinical data was prospectively collected over a 14-month period comparing neonates who had and did not have UCS and their respective number of transfusions in the first week of life. From 153 admissions, 69 infants were excluded due to ex-utero transfer, death, or transfer out within the first week of life, and eight due to sampling issues. The final cohort of 76 neonates were born between 23+0 and 31+6 weeks gestation, were 50% male and female and had birthweights ranging from 465g to 1970g.

Results: UCS reduced the transfusion rate in the first week of life by half, reducing it from 32% (no UCS) to 16% (with UCS). When analysing the impact of DCC (delayed cord clamping) and UCS:

No intervention (No DCC or UCS): Highest transfusion rate at 63%.

DCC alone: Transfusion rate of 27%.

DCC and UCS: Transfusion rate of 17%.

UCS alone (compromised delivery, no DCC): 0% transfusion rate within a small sample size.

Discussion: Our results support the use of UCS to reduce the transfusion burden in premature neonates in the first week of life. In our cohort the number of transfusions in the first week reduced by 10%, when compared proportionately. Our results suggest that where delivery is compromised and the benefit of DCC is missed, UCS may arguably be of even greater benefit to these babies. Further data collection and analysis is ongoing as with a much larger sample size we aim to demonstrate a statistically significant reduction in transfusion and benefit in preterm neonates.

Biography

Dr. Katherine Bowler is a Paediatric Resident Doctor currently working in the East of England deanery, UK. Bowler is passionate about research, medical education and improving clinical practice, with research interests to date in oncology, medical education and neonatal intensive care.



Olivia Abrams*, Salman Khurshid, Victoria Boswell

Russell's Hall Hospital, Dudley, United Kingdom

Improving breastfeeding rates at discharge from Russell's Hall Neonatal Unit: A quality improvement project at a district general hospital

The benefits of breastfeeding to the newborn infant are long-established, and the administration of human milk is considered the gold standard for infant feeding universally. Human milk is specifically designed to pass on specific antibodies from mother to child, and new evidence suggests breastfeeding may play a role in reducing chronic disease, such as childhood obesity and Type 2 Diabetes.

The effects aren't only physical – breastfeeding is thought to have a positive psychological impact on both mother and child, and is best for the environment, and often financially for many families. Breast milk is especially important in the neonatal unit, as both short- and long-term outcomes for sick and pre-term infants have been proven to be improved with breastfeeding.

Despite the importance of human milk in the neonatal infant, rates of breastfeeding at discharge from the Russell's Hall Neonatal Unit have been consistently below the national average. Over the past 10 months, a team led by Dr Abrams, Dr Khurshid and midwife Victoria Boswell have worked as a multidisciplinary team to identify barriers and implement targeted interventions to try and improve these rates.

The quality improvement project involved collaboration with staff, parents, community midwives, and experienced breastfeeding advocates to better understand the challenges and develop sustainable solutions. Qualitative feedback was gathered in a number of ways – using online surveys and paper surveys for parents and staff, informal discussions with members of staff as well as focus groups with local experts in breastfeeding, to ensure a broad array of

opinions and ideas were considered. Based on the feedback received, interventions included breastfeeding engagement days, targeted education for junior doctors, and the introduction of antenatal information leaflets provided at booking appointments to promote the benefits of breastfeeding.

Since implementation, breastfeeding rates at discharge have shown a sustained and significant improvement. Ongoing feedback from staff and families continues to inform the project, ensuring interventions remain effective and supporting continued progress towards improved breastfeeding outcomes.

Biography

Olivia Abrams is a Foundation Doctor based in Dudley with a strong passion for neonatology and improving outcomes for all children, regardless of the circumstances into which they are born. Abrams is currently undertaking a General Surgery rotation as part of Foundation Year 1 training and aspires to pursue a career in neonatal medicine, hoping to contribute to advancing the care of newborn infants and supporting their families.



Patricia S. Vandergrift*, Ann L. Smith, Art Payne, Neelam Pandhi

Novant Health Forsyth Medical Center, Winston Salem, North Carolina, United States

Preparing for the future: A process improvement project to standardize discharge preparedness for late preterm infants

Trigger: Late Preterm Infants (LPIs) (34–36 weeks gestation) require specialized support due to unique developmental challenges that increase readmission risks. The initial assessment identified significant variability in existing discharge methodologies across a Southeastern U.S. healthcare system, particularly regarding feeding plans, outpatient lactation service, and timely Primary Care Provider (PCP) follow-up. This project addresses these inconsistencies to enhance successful transitions home for LPIs and ultimately prevention of readmissions.

Problem/Goal Statement: This quality improvement initiative aims to standardized LPI discharge preparedness. The primary goal is to increase adherence to the set LPI criterion by 15% by December 31, 2025. The targeted objectives include ensuring robust and consistent documentation of feeding plans, lactation consultants scheduling outpatient follow-up lactation services, and assuring a PCP appointment is scheduled before discharge.

Actions Taken: A multidisciplinary team developed and implemented a comprehensive education plan for all Mother Baby staff and providers. The training emphasized consistent LPI feeding plans (caloric intake, schedule, supplementation), the necessity of continued outpatient lactation services, and early establishment of PCP care. Monthly, re-education was necessary to improve consistency and hard-wire these LPI discharge preparedness practices.

Measurable Outcomes: Monthly LPI audits will track key metrics: completeness of feeding plan (breast/bottle, caloric intake, supplementation) and confirmation of prompt post-discharge PCP and lactation appointments.

Conclusion: Preliminary data indicates that standardizing discharge preparedness for LPIs has slowly but significantly enhanced infant health and decreased hospital readmission rates. The findings reinforce the critical importance of a structured approach to strengthening feeding plans and promoting follow-up care, ultimately fostering a supportive environment for families and promoting better long term LPI health outcomes.

Recommendations for Practice: Recommendations include integrating structured LPI discharge preparedness into routine clinical practice. Sustained success requires ongoing staff training, regular audits, and continuous improvement of care based on data-driven insights. Prioritizing these strategies empowers healthcare systems to substantially improve care quality and outcomes for late preterm infants.

Biography

Patricia Vandergrift has been a Nurse for 35+ years and Neonatal Nurse Practitioner for 20 years, and graduated from the University of South Alabama in 2014 with a Doctorate in Nursing Practice. Vandergrift has been employed at Novant Health–Forsyth Medical Center for the last 20 years working in the NICU setting; the current role includes bedside NNP, QI coordinator for Women and Children's Institute, and Perinatal & Neonatal Palliative Care Coordinator. Vandergrift's expertise ranges from cue-based feedings, developmental care, noise control, kangaroo care, SIDS prevention, IVH protocol, late preterm infants care, pain, and emergent intubations.



Shubham Singh*, Amit Bhatia

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(MRSPTU), Bathinda (151001), Punjab, India

Fabrication and evaluation of pyrazinamide tablets for paediatric tuberculosis using Fused Deposition Modelling (FDM) 3D printing technology

The World Health Organization recommends the use of Pyrazinamide for first line antituberculosis drug for the treatment of TB. Developing age-appropriate dosage forms is critical for effective pharmaceutical therapy, particularly chronic conditions like paediatric Tuberculosis (TB) requiring prolonged treatment. This study aimed to develop 3D printing tablets using Hot Melt Extrusion (HME) to produce drug loaded filaments for subsequent 3D printing via Fused Deposition Modeling (FDM). Pyrazinamide and Polyvinyl Alcohol (PVA) were used to fabricate PZA-loaded PVA 3D printed tablets. The printed tablets were evaluated for key pharmaceutical parameters including *in vitro* dissolution, friability, hardness, disintegration and weight variation within $\pm 5\%$. The fabricated pyrazinamide 3D printed tablet showed cumulative drug release of 92.67% within 0-150 minute. This work highlights a novel approach for producing paediatric TB formulations through 3D printing, offering potential for personalized dosing and improved treatment compliance in paediatric patients.

Biography

Shubham Singh is currently pursuing a Ph.D. as a Research Scholar and Junior Research Fellow at MRSPTU, Bathinda, Punjab, under the guidance of Prof. (Dr.) Amit Bhatia, and has qualified the Graduate Pharmacy Aptitude Test (GPAT) twice, reflecting a strong academic foundation and dedication to the field of pharmaceutical sciences. Singh's primary research interest lies in the development of advanced drug delivery systems using 3D printing technology within the pharmaceutical domain, with a particular passion for exploring innovative approaches to enhance therapeutic outcomes through personalized medicine. At present, Singh's research focuses on pharmaceutical applications targeting pediatric tuberculosis, with an emphasis on developing patient-centric, efficient, and adaptable drug delivery systems.



Umashankar Palanisamy

Sudha Mother and Child Care Hospital, India

Meckel's diverticulitis causing distal ileal volvulus with ruptured mesenteric cyst in a child with severe bilateral pneumonia: A rare surgical emergency

Background: Acute abdomen in children with severe pneumonia poses a significant diagnostic challenge. Abdominal pain may initially be attributed to lower lobe pneumonia, delaying recognition of an underlying surgical pathology. Meckel's diverticulitis is an uncommon cause of intestinal obstruction, while volvulus secondary to inflamed Meckel's diverticulum associated with a ruptured mesenteric cyst is exceptionally rare.

Introduction: Acute abdomen developing during treatment of severe pneumonia is uncommon but clinically important. Lower lobe pneumonia may produce referred abdominal pain, potentially masking life-threatening intra-abdominal conditions. Meckel's diverticulum is the most common congenital anomaly of the gastrointestinal tract, occurring in approximately 2% of the population. Symptomatic cases are uncommon, with intestinal obstruction representing one of the major surgical emergencies. Mechanisms include volvulus, intussusception, internal herniation, inflammatory adhesions, and bands. Mesenteric cysts are rare benign intra-abdominal lesions in children. Their coexistence with inflamed Meckel's diverticulum causing volvulus has rarely been reported. We report an unusual case of Meckel's diverticulitis producing distal ileal volvulus associated with rupture of a mesenteric cyst in a child with severe bilateral pneumonia.

Case Report: A 5-year-old male child presented with fever for three days and respiratory distress. He was admitted to a peripheral hospital where chest radiography demonstrated bilateral multilobar pneumonia with pleural effusion. He was managed with oxygen supplementation and intravenous broad-spectrum antibiotics. On the third day of hospitalization, he developed diffuse abdominal pain and progressive abdominal distension.

The abdominal distension rapidly worsened over the following 12 hours, prompting referral to our institution. On arrival, the child was toxic-looking, febrile, tachypneic, and receiving oxygen supplementation. Clinical examination revealed pallor without icterus. Respiratory examination demonstrated bilateral coarse crepitations. Abdominal examination showed marked distension with generalized tenderness, guarding, rigidity, and absent bowel sounds, consistent with generalized peritonitis. Laboratory investigations revealed inflammatory changes. Abdominal ultrasonography demonstrated dilated small bowel loops with distal ileal obstruction and free intraperitoneal fluid. Plain abdominal radiograph showed multiple dilated small bowel loops with numerous air-fluid levels.

Contrast-enhanced CT abdomen demonstrated:

Dilated proximal small bowel loops

Distal ileal obstruction

Whirlpool sign suggestive of volvulus

Significant free intraperitoneal fluid

CT chest confirmed bilateral multilobar consolidation with pleural effusion. Considering the clinical deterioration, generalized peritonitis, intestinal obstruction, and severe pneumonia, emergency exploratory laparotomy under general anesthesia was performed.

Operative Findings: The operative findings included:

Dilated proximal small bowel

Volvulus involving the distal ileum

Inflamed Meckel's diverticulum acting as the lead point for volvulus

Ruptured mesenteric cyst with approximately 500 mL of amber-colored fluid

Reactive intraperitoneal contamination without gross fecal contamination

The volvulus was carefully detorsed. Segmental ileal resection including the Meckel's diverticulum was performed, followed by primary ileo-ileal anastomosis. The ruptured mesenteric cyst was excised, and thorough peritoneal lavage was performed.

Postoperative Course: The child remained ventilated in the pediatric intensive care unit because of underlying severe pneumonia.

POD 2: Successfully extubated

POD 4: Passed flatus and stools

POD 5: Oral sips initiated

POD 7: Advanced to soft diet

POD 10: Discharged in stable condition

At follow-up, the child remained asymptomatic with normal bowel function.

Discussion: Meckel's diverticulum accounts for nearly half of congenital gastrointestinal anomalies but becomes symptomatic in only a minority of patients. Obstruction remains the most frequent indication for surgery in children. Volvulus secondary to inflamed Meckel's diverticulum is uncommon and may result from inflammatory adhesions, persistent vitelline remnants, or torsion around the diverticulum. Mesenteric cysts are rare lesions with an incidence estimated between 1 in 20,000 and 1 in 250,000 pediatric admissions. They may

remain asymptomatic or present with obstruction, volvulus, infection, hemorrhage, or rupture. Spontaneous rupture associated with Meckel's diverticulitis has rarely been described. This patient presented an additional diagnostic challenge because severe bilateral pneumonia initially dominated the clinical picture. Abdominal pain in lower respiratory infections is frequently attributed to diaphragmatic irritation, potentially delaying recognition of surgical emergencies. The rapid progression to generalized peritonitis prompted cross-sectional imaging, where the whirlpool sign strongly suggested volvulus. Early surgical exploration prevented bowel ischemia and allowed definitive treatment of all underlying pathologies in a single procedure.

Conclusion: This case highlights an extremely rare coexistence of Meckel's diverticulitis causing distal ileal volvulus with rupture of a mesenteric cyst in a child undergoing treatment for severe bilateral pneumonia. Children with pneumonia who develop progressive abdominal distension, tenderness, guarding, or intestinal obstruction should be evaluated promptly for an intra-abdominal surgical emergency. Early CT imaging and timely exploratory laparotomy remain crucial for preventing bowel loss and improving outcomes.

Biography

Dr. Umashankar Palanisamy is a dedicated Consultant Paediatric Surgeon with specialized training in Paediatric Surgery and experience in managing surgical conditions affecting infants, children, and adolescents. Palanisamy completed his M.B.B.S. from Rajah Muthiah Medical College and Hospital, Chidambaram, followed by M.S. in General Surgery from Meenakshi Medical College & Research Institute, Kanchipuram, and M.Ch. in Paediatric Surgery from Coimbatore Medical College Hospital under The Tamil Nadu Dr. M.G.R. Medical University. Palanisamy has prior experience as a Senior Resident and Assistant Professor of General Surgery. Palanisamy professional interests include minimally invasive and advanced paediatric surgical procedures. Dr. Umashankar has presented over 50 seminars and several papers and posters at national conferences, including PESICON and NEPSCON. Palanisamy received First Prize for Paper Presentation at PESICON 2024 and has contributed to several academic publications.



Veronica Deysi Genoveva Colombo

ASST Bergamo Ovest, Italy

Vaccine co-administration babies in Lombardy region: An effective way to improve coverage

Background: In European after pandemic period for SARS Covid 2019-2023 we are encountered serious complications and mortality data associated with infectious diseases increase with age. Vaccination against influenza and Covid (annually) are recommended for children and specific risk groups. In international lecture, we are many article that discuss about vaccine co-administration in adults thanks to these indications. While they was approved in Italy, Calabria region, the first region to get the co-administration in children by first to second year of life. In Italy, since June 2025 to now, we are combined hexavalent vaccine: Tetanus, Pertussis, Diphtheria, and acellular vaccine with Haemophilus influenzae type B, Poliomyelitis, Hepatitis B plus Meningococcal B, Pneumococcus and Rotavirus. Not more meningococcal C but Meningococcal ACWY and MMRV (measles, mumps, rubella and varicella or chickenpox) are recommended for healthy children at 1 years old and with recall at 5 years old.

Lombardy region data: Vaccines like hexavalent, pneumococcus and meningococcus B are recommended in the same day at 61 days of life, at 4 and 10 months for children, because the coverage rates remain high after 4 months accesses and became suboptimal after 1 years of age. With actual co-administration the Lombardy region would improve vaccine uptake and timely immunization, this is a good routine practice in children. We review key data on co-administration of four vaccines in children to reassure healthcare providers about its safety and advantages. Now co-administration are well established in children in Lombardy region with maximum 3 injections in the legs for first and second appointment and 1 oral dose for prevent Rotavirus. Minimum 2 injections in the legs for third appointment at 10 month with 1 for legs and more 1 injections also in the arm for the last dose MMRV, after happy birthday. It is

less common in IUGR for intrauterine growth restriction or SGA for small for gestational age in severe condition in which the babies fails. Only in these cases, we maintain the old vaccination schedule with 7 doses between 2-15 months.

Statistical Data: With Anova we have analysis babies birth in the 2023-2024 with vaccine finished in 2024-2025 for the first group versus concluded in 2025-2026 for the second group.

Data Bergamo Analysis: Local data analysis has allowed us to highlight with statistical charts the significance of reducing vaccination sessions from 7-8 to 4-5. As can be seen from the data in the graphs shown here with a significance of $p < 0.05$ for the data from the province of Bergamo. And with a significance of $p < 0.001$ for the sample data of 6 months from ASS Bergamo Ovest.

In conclusions: We confirm these results of previous author in bibliography to promote it into Italian national scale and European Unit. Thanks to these new-baby schedules, we finished in time the babies schedule and we have been able to organize for immigrate, adolescent and travel vaccine. These news data are always in co-administration because we have a well-established positive benefit-risk profile, it's an efficient and cost-saving strategy to improve coverage. Recommending bodies also in schedule babies may consider revising vaccination schedules to reduce the number of visits. Healthcare providers could more often recommend and practice vaccine co-administration; this would not risk patient safety and health, would improve protection against vaccine-preventable diseases, would help comply with national vaccination calendars in a range of 12-13 months in the mean. We note an increase of facultative vaccination consequently to oblige vaccination in the baby, in the best moment in which he needs more of protection, with an evident reduce of date and distress for baby and parents (reduced work permission). So we can underline the positive outcome for Public Health Organization in sanitary Lombardy region and administrative planning in 4-5 babies' regular vaccination sessions.

Keywords: Healthcare Provider, Concomitant Immunization, Primary Care, Simultaneous Vaccine Uptake.

Biography

Veronica Deysi Genoveva Colombo is a Pediatric Neonatologist, Ultrasound Specialist, and ABA Therapist, as well as a Disability and Case Manager for metabolic diseases and autism spectrum disorders. Colombo has been working since 2013 at the Treviglio Caravaggio Hospital and ASST Bergamo, and at the San Martino Diagnostic Center in Treviglio, also holds a PhD in Criminology, and works as a consultant in civil and criminal cases.

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