






 Cranial
(CUS)

 Airway
(POCUS-A)

 Lung
(POCUS-L)

 Vascular(POCUS-
VAL)

 Bowel
(POCUS-B)

POCUS-CRANIAL ULTRASOUND IN NEONATAL CARE

MPROvE Academy

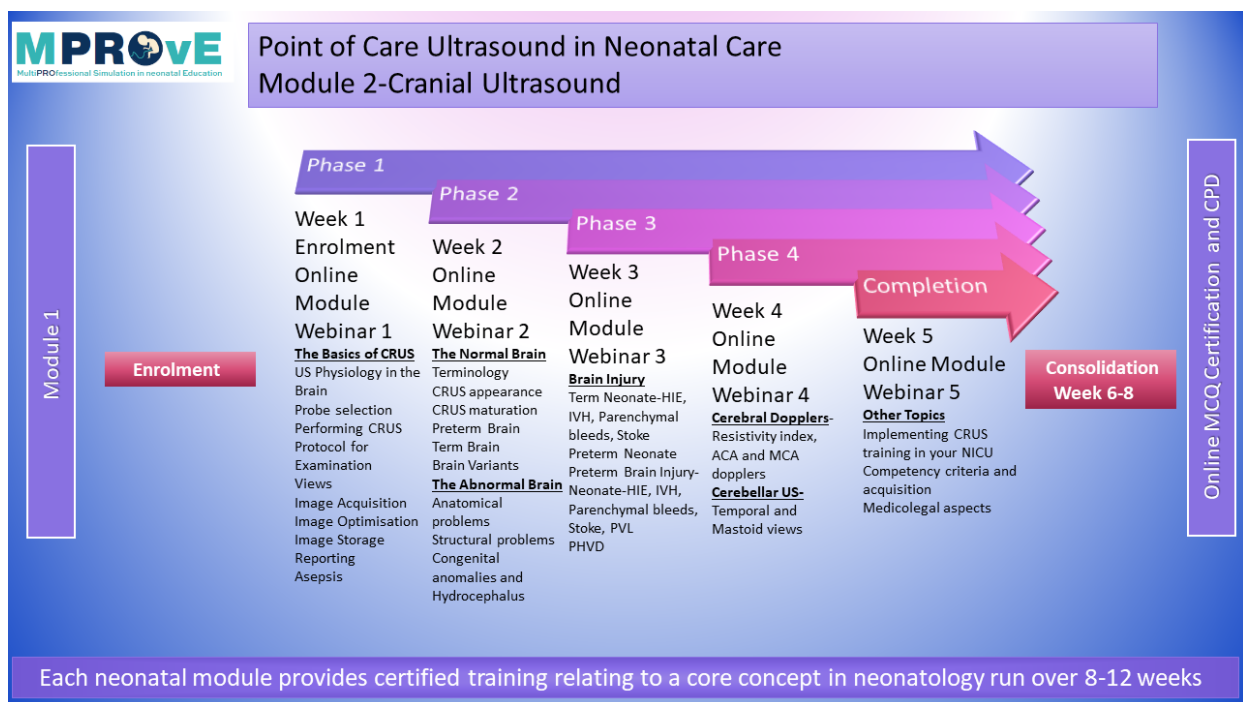
Cranial Ultrasound in Neonatal Care

The MPROvE Academy was established in 2012. It delivers training in neonatology, delivering courses in neonatal emergency medicine, ethics, human factors, and the neonatal airway.

The academy has introduced point-of-care ultrasound training in neonatal intensive care, which is run in five modules covering Neonatal Lung, Brain, Airway, vascular access, and Bowel. The second module on Cranial Ultrasound will be run over an 8-week period in 2025. It is delivered by an international faculty from four continents.

The teaching involves a combination of didactic online teaching sessions in the first month followed by workshops, interactive sessions and guest webinars by the faculty covering the key learning objectives below-[\(Explained on this video\)](#)

1. Neonatal Cranial Ultrasound-Introduction and Basics
2. The Normal Brain
3. The Abnormal Brain and Pathology
4. Clinical correlation, diagnosis, and clinical approach
5. Protocols and Implementing CRUS



There is an online platform covering all aspects of cranial ultrasound, including normal anatomy, scanning protocols, views, machine use, neonatal brain imaging, prognosis, and parental perspectives. For those with less time commitment, the participants can learn via the videos on the online platform. For those of you who would like accreditation via the course, it is mandatory that you have access to a US machine and can share cases and images in an anonymised way. We will teach you how to do that. At the end of the course, you must take an online exam with a passing mark, which will review the core parts of the curriculum as outlined above. The testing can be done anytime within the first six months after the module starts.

Core Faculty

Dr. Alok Sharma

Dr Alok Sharma is the course director and lead trainer for the Neonatal Point of Care Ultrasound training at the MPROvE academy. He is a Consultant Neonatologist working at the Corniche Hospital Abu Dhabi UAE. He has worked as a physician in neonatology and paediatrics for 22 years, having trained in India and the United Kingdom.

Dr Alok is a consultant neonatologist with a special interest in Neonatal education, simulation and Point of Care Ultrasound. He has completed a neonatal transport fellowship in Leicester, UK. He has also trained in neonatal cardiology and echocardiography in Southampton, UK. He has trained in Lung US at the Antoine Beclere hospital in Paris, France and the NICU at Southampton. He has completed a Postgraduate certificate course in Point of Care Ultrasound run by Dr Pradeep Suryavanshi.

He is a certified simulation healthcare provider trained by the society of simulation healthcare and was neonatal simulation lead in Southampton, UK, from 2012-2017. He has developed and runs the simulation instructor, neonatal emergencies and difficult neonatal airway courses globally.

He is the director of the MPROvE academy, a not-for-profit educational initiative in neonatology which has helped deliver education in the UAE, France, Austria, Germany, Vietnam, India, Kenya, and Nepal. He founded the Neonatal Ethics and Difficult Situations Course, which is run nationally in multiple centers in the UK along with Dr D Wilkinson, Dr Sijo Francis, and Dr S Babarao and is chair and lead organiser for the European Neonatal Ethics Conference.

He has designed specialized preterm manikins with LifeCast and Elstree Studios in the United Kingdom.

Work on multidisciplinary neonatal simulation done by his team and its impact on neonatal outcomes was nominated for the National BMJ Award, securing the Runner's Up position in 2014 in the UK. It was awarded the Best Research Award at SPIH 2014.



**MBBS, MRCPCH,
CCST, CHSE**

- Course Director and lead trainer at MPROvE Academy
- Consultant Neonatologist, Corniche Hospital, Abu Dhabi



Dr. Aimen Ben Ayadi

Dr. Aimen Ben Ayad is a highly qualified and experienced neonatologist. He has been American board-certified in Pediatrics and Neonatology since 2017. After completing his medical education and residency training in the United States, Dr. Ben Ayad gained valuable experience at Javon Bea Hospital, Mercy Health.

In 2022, he relocated to the United Arab Emirates, where he currently serves as a consultant at Tawam Hospital, a leading tertiary-level NICU. Beyond his clinical practice, Dr. Ben Ayad is dedicated to advancing the field of neonatology through education and research.

He holds the position of Clinical Assistant Professor at the United Arab Emirates University, sharing his expertise with future generations of healthcare professionals. Dr. Ben Ayad, a respected educator and mentor, has received numerous accolades for his teaching contributions.

He is also a sought-after international speaker, regularly participating in conferences and workshops across the globe. In addition, he has held various positions, including Transport Medical Director at Javon Bea Hospital from 2020 to 2022 and is a global NRP instructor.

- Neonatologist
Tawam Hospital, Al Ain,
Abu Dubai, UAE



Dr. Abhijit Bhattacharya

Dr. Abhijit Bhattacharya currently works as a Senior clinical fellow in Princess Royal Maternity Hospital, Glasgow, UK. He is an experienced and highly skilled Neonatologist with over 9 years of work experience in India and the UK. He is extremely proficient in leading and managing large-scale Neonatal Intensive Care Units and overseeing high-volume Labor and Delivery Services.

Dr. Abhijit Bhattacharya is a brilliant collaborator, a dedicated Neonatal Specialist who cares about newborn babies and believes in providing the best treatment, and a compassionate human who understands the value of effective communication with parents.

He is Currently involved in developing first-of-a-kind Scottish Neonatal Hemodynamic and POCUS group where conduct training for Lung US, vascular access US and Neo-Hemodynamic US.

He developed Lung US guidelines and protocol for the unit and has also written an e-book for the same. He is currently working on an e-book encompassing all the branches of Neonatal Point of care Ultrasound.

**MD,
RCPCH NEONATAL
FELLOWSHIP**

**Neonatal Clinical
Specialist and Trainer**

- Locum Consultant in Cross house Maternity and Neonatal unit, Ayrshire, UK
- Senior clinical fellow in Royal Children Hospital and Royal Alexandra hospital, Glasgow, UK



Dr. Praveen Kishore

Dr Praveen Kishore is a Consultant Neonatologist at the Trevor Mann Baby Unit regional NICU at University Hospitals Sussex, Brighton

Praveen completed his undergraduate medical education and post-graduation in Paediatrics in India. He has trained in neonatal intensive care in Bristol, Southampton and Portsmouth in the UK, and has a special interest in neonatal cardiology and haemodynamics.

He has a keen interest in neonatal education and simulation training and is an instructor on the RCUK ARNI and NLS courses. He has a special interest in human factors and role of structured debriefing in simulation.

*DCH, DNB, MRCPCH,
CCT*



Dr. Ranjit Kumar Gunda

Dr Ranjit Kumar Gunda is a Consultant Neonatologist who is trained in UK and worked in very busy tertiary neonatal medical and surgical intensive care units and has 14 years of experience in Tertiary Neonatal Intensive care.

Dr Ranjit obtained MBBS from Osmania Medical College India and completed his Paediatric training from West Midlands, UK and received MRCPCH from Royal College of Paediatrics and Child Health. Following this he completed Neonatal GRID training from Wessex Deanery, UK and obtained CCT in Neonatology from RCPCH, UK.

Dr Ranjit has got special interest in Neonatal Transport and completed one year fellowship in Neonatal transport from CenTre Neonatal transport team, UK. Following that he worked as a Consultant Neonatologist in UK and moved to India and worked with Rainbow Children's Hospital, India as a Consultant Neonatologist and Neonatal Transport Lead.

Dr Ranjit has special interest in Simulation based training and is very keen on quality improvement and patient safety by multiprofessional education. He is co-founder for MPROVE academy and an active member of PediSTARS (Paediatric Simulation Training and Research Society) group in India. He was awarded the best oral presentation at the ASPIH International Conference (Association of Simulated Practice in Healthcare) for his work on cost effective targeted simulation to improve patient outcomes. He has a special interest in low-cost models. He is an instructor in newborn life support courses and Simulation Instructor courses and neonatal simulation training courses. During the covid pandemic actively involved in he was involved in developing SPAN-T Tele Simulation Training Programme, a virtual simulation programme for paediatricians and neonatologists across India.

*MBBS, MRCPCH,
FRCPCH, CCT-
NEONATAL MEDICINE
(UK)*

*CONSULTANT
NEONATOLOGIST AND
HOD NEONATOLOGY,
AHALIA HOSPITAL, ABU
DHABI*

Expert Speakers



Dr. Pradeep Suryawanshi

Dr. Pradeep Suryawanshi is currently the professor and head of the Department of Neonatology at BVU Med College , Pune. He is also designated as the director of Neonatology and Paediatrics at Sahyadri Hospitals Pune as well as a mentor of department of Pediatrics at BLDE University Bijapur.

Dr. Pradeep Suryawanshi is gold medalist during his undergraduate years and completed post-graduation and Pediatrics from India and Australia. He has completed a fellowship in Neonatology specializing in point of care Ultrasound in Neonatology.

Dr .Suryawanshi runs a post graduate programme which has trained hundreds of clinicians in point of care globally.

He has authored 71 articles, written 3 national guidelines and authored chapters in 16 different textbooks.

He is also mentored the set up and training of 34 NICUS in India.

**M.D, D.C.H (SYDNEY),
FELLOW
NEONATOLOGY
(AUSTRALIA),
FRCPCH(UK), FNNF**

Topic	Speaker	Date/Time	Link
Introduction-US Basics and Physiology			
1. Introductions to the module, mentorship, logbooks, accreditation Part 1-US Physics Part 2-Basic and Normal Anatomy Part 3-The Normal Views Part 4-Mental Modelling Clinical Correlation	Dr Alok Sharma Core Faculty Webinar 45+15m	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	
2. Performing CRUSS in Neonates Part 1-The Machine Probe selection, Settings, Image Optimisation Part 2-The Baby Positioning, Containment, Asepsis Part 3-Protocol for the study Part 4- Image acquisition, Image storage, Reporting, Templates	Dr Alok Sharma Core Faculty Webinar 45+15m	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	
Introduction-US Profile and Nomenclature			
3. Performing CRUSS Imaging -Part 1 Nomenclature Terminology The Term Neonate The Preterm Neonate Preterm Brain Maturation Normal Variants Peer Review 0	Dr Aiman Ben Ayad Core Faculty Workshop 90m	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	
4. Performing CRUSS Imaging-Part 2 Image Optimisation Departmental Protocols Quality Assurance and Peer Review Cerebral Doppler Measurements in Cranial US Peer Review 1	Dr Abhijit Bhattacharya Core Faculty Webinar 45+15m	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	
The Term Baby-The Abnormal Brain			
5. The Term Baby with Neonatal Hypoxic Ischemic Encephalopathy after birth CRUSS Protocol Patterns of Injury Further imaging MRI Peer Review 2	Dr Abhijit Bhattacharya Core Faculty Webinar 45+15m	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	

Topic	Speaker	Date/Time	Link
6. Term baby with ICH, IVH and Stroke CRUSS Patterns of Injury Further imaging Peer Review 3	Dr Alok Sharma Core Faculty Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
7. <u>Expert Session</u> Infection of the Brain Bacterial Viral (TORCH)	Dr Pradeep Suryavanshi Expert Speaker Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
8. <u>Expert Session</u> Congenital Abnormalities, including Hydrocephalus in the Term Neonate Peer Review 4	Dr Ranjit Gunda Core Faculty Workshop 60m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
9. Cerebellar Imaging Mastoid Views Measurements Peer Review 5	Dr Alok Sharma Core Faculty Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	

Topic	Speaker	Date/Time	Link
The Preterm Baby-The Abnormal Brain			
10. The Preterm Brain and maturational change of the Preterm Brain Intraventricular haemorrhage Appearance Grading Peer Review 6	Dr Alok Sharma Core Faculty Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
10a. Post Haemorrhagic Ventricular Dilatation Appearance, Grading, Measurements Peer Review 7	Dr Praveen Kishore Core Faculty Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
11. White Matter Injury in the Preterm Baby Diagnosis Grading Screening Protocol Peer Review 8	Dr Praveen Kishore Core Faculty Webinar 45+15m	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
Protocols, Clinical Correlation, and Clinical Approach			
12. Screening Protocols for Preterm Baby- Current Evidence and Practices a. Screening Programme vs Individualized Approach b. Case-based discussions Peer Review 9	Dr Alok Sharma Core Faculty Webinar 45+15 minutes	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
13. The MDT approach to the baby with the enlarging head and ventricular dilatation Term vs Preterm a. Clinic radiological approach b. Neonatal Management c. Paediatric and Neuroradiologist Perspective d. Neurosurgical Approach	Dr Alok Sharma Dr Ranjit Gunda Core Faculty Workshop 90 minutes	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	
14. The MDT approach to Antenatal Brain Abnormalities a. The Spectrum b. Fetal Medicine Neonatal Liaison c. Antenatal Pathways and Postnatal Plans d. Antenatal Palliative Care Pathways	Dr Alok Sharma Dr Ranjit Gunda Core Faculty Workshop 90 minutes	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	

Prognosis Communication and Parental Perspectives (OPEN Sessions)

<p>15. Parents, Prognosis, Breaking Bad News Part 1 IVH a. Parental Perspectives- Hearing is not Understanding, Am I ready for this? Hope? b. How should MDT approach discussions in this regard c. The Impact of Culture and Religion</p>	<p>Dr Aiman Ben Ayad Core Faculty Workshop 45+15m</p>	<p>Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100</p>
<p>16. Parents, Prognosis, Breaking Bad News Part 2 Perinatal Depression, Neonatal Encephalopathy HIE a. Parental Perspectives- Hearing is not Understanding, Am I ready for this? Hope? b. How should MDT approach discussions in this regard</p>	<p>Dr Alok Sharma Core Faculty Workshop 45+15m</p>	<p>Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100</p>

Close and Testing Window Open

