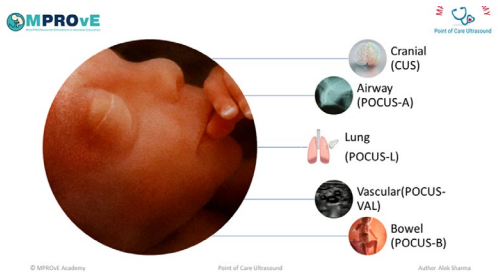


LUNG AND AIRWAY ULTRASOUND

NEONATOLOGY, PAEDIATRICS AND INTENSIVE CARE

Alok Sharma
MPROVE ACADEMY | SOUTHAMPTON UK 2026

Introduction

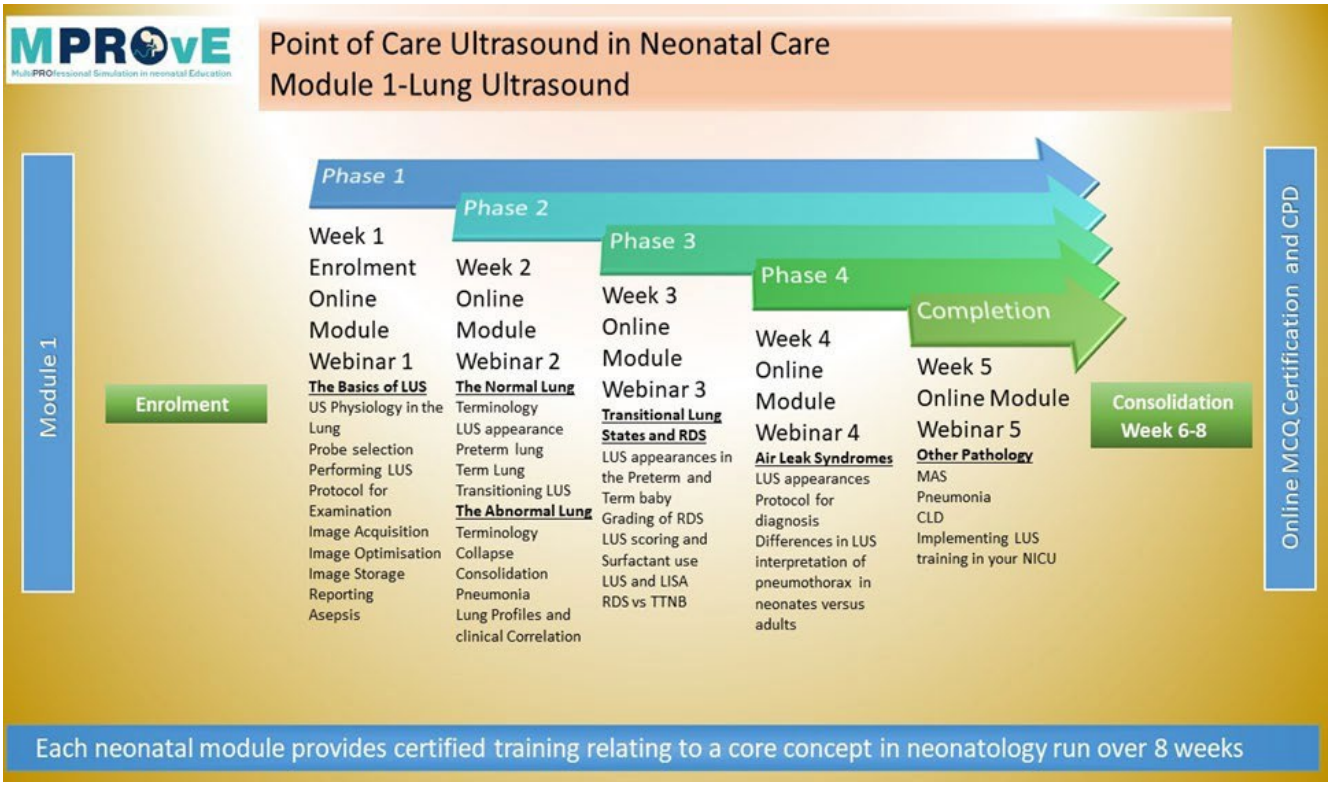
The MPROvE Academy was established in 2012. It delivers training in neonatology, delivering courses in neonatal emergency medicine, ethics, human factors, and the neonatal airway.

The academy has introduced Point of Care Ultrasound training in neonatal intensive care, which is run in five modules covering the Neonatal Lung, Brain, Airway, Vascular access, and Bowel.

The first module on Lung Ultrasound is being run in 2026 over a 12-week period. It is delivered by an international faculty from four continents.

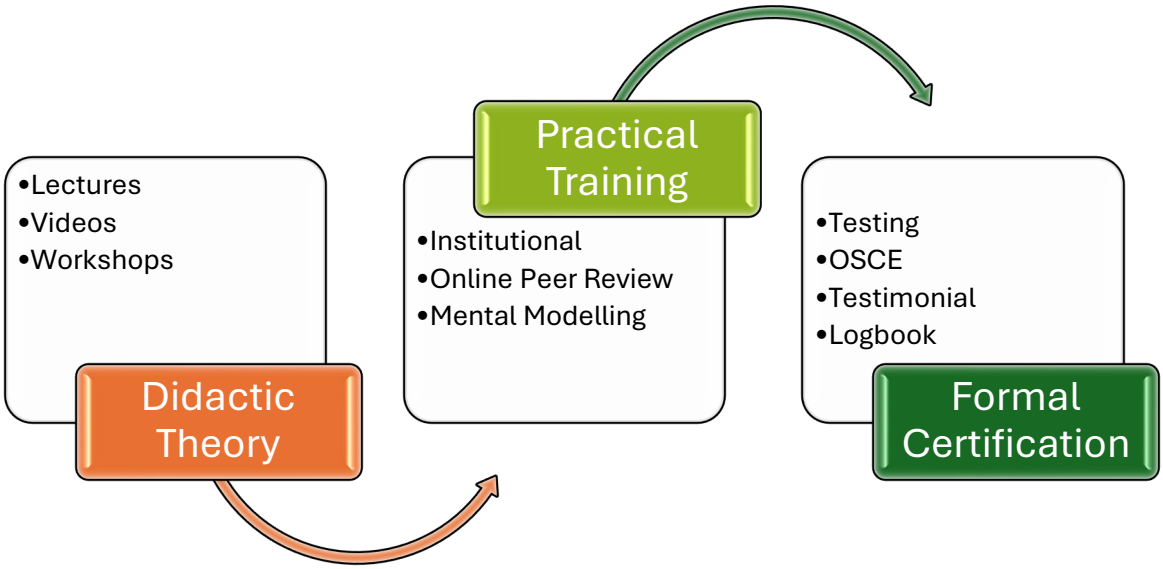
The teaching involves a combination of didactic online teaching sessions in the first month followed by workshops and guest webinars by the faculty covering the key learning objectives below-(Explained on this video)

1. The Normal Lung
2. The Abnormal Lung
3. Clinical correlation, diagnosis, and clinical approach
4. Diagnostic and Therapeutic Procedures



Course Platform

This is an online course with an online platform covering all the aspects of Lung Ultrasound over 16 chapters with an additional chapter on US of the neonatal airway. Material is delivered through didactic online sessions, peer reviewed online content, peer reviewed videos and online workshops to help develop your theoretical understanding. Each participant has their own portal with access to content and a content library.

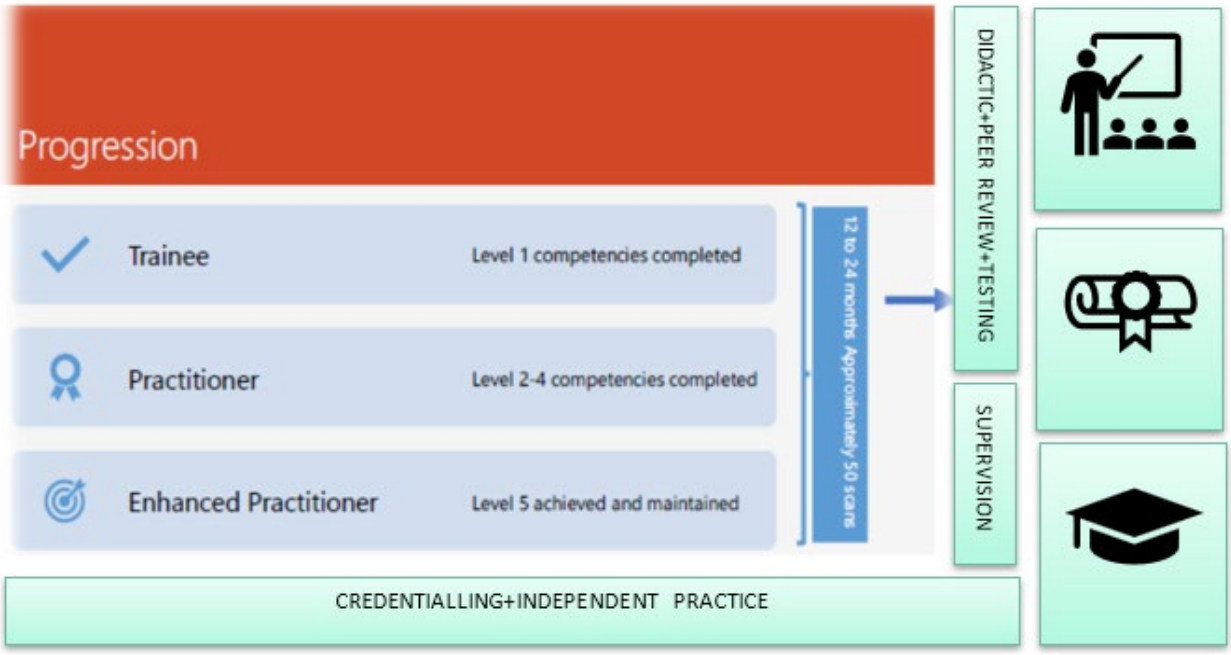


Skill Acquisition

Participants consolidate their learning through practical exposure at their place of work with local supervision or through peer review of anonymized cases online. The clinical tutors complete Objective structural assessment forms alongside peer review to help consolidate the practical skills. Participants are encouraged to keep of a logbook and maintain a log of their scans with reflections. For those 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 anonymized way. We will teach you how to do that. At the end of the course, you must take an online exam that has a passing mark which will be a review of the three core parts of the curriculum as outlined above. The testing can be done anytime within the first six months after the module starts. Completion of testing alongside acquisition of practical competencies helps with accreditation and certification at the end of the course.

Credentialling

Participants need to follow their institutional and or national guidelines for the purpose of Credentialling. This course follows a credentialing pathway as outlined below.



Testing and Graduation

Practical assessment is through Peer review of scans. Quality assurance is carried out through completion of Objective structural assessment forms. Theoretical knowledge, clinical correlation, diagnostic rigor are assessed through an end of course AI powered MCQ that is centile based.

Graduation involves completion of at least 20 scans alongside completion of testing and can be done in the participants time over 6 months.

Topic	Speaker	Date/Time	Link
Introduction-US Basics and Physiology			
1. Introductions to the module • Structure • Mentorship & Peer review • Logbooks, • Accreditation & Credentialling **Boot camp Week (13th to 22nd March)** Induction and Access to the Online Portal Registration to the Online Library and WA group	**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	13.03.2026 Friday
2. Performing Lung US **Part 1-US Physics** • US Physiology in the lung, • Artefact • Nomenclature as per International Guidelines • Nomenclature used in this course	**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	22.03.2026 Sunday
3. Performing Lung US **Part 2-The Protocol** • Probe selection, Settings, Performing LUS • Protocol for examination- Neonate, Infant, Child • Image acquisition. • Image storage • Reporting, Reporting templates	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	26/03/2026 Thursday
Introduction-US Profile and Nomenclature			
4. The Normal Lung • What is normal? • Normal Lung Profile • Defining and reporting lung profile • Nomenclature Revisited	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	29/03/2026 Sunday

5. The Normal Lung • Lines and Signs in Lung US • Pattern Recognition • Lung Profiles -A, B, C • The P-ABCDE Protocol	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	02/04/2026 Thursday
The Abnormal Lung			
6. The Abnormal Lung-Part 1 • RDS • TTNB • MAS • Pneumothorax	**Dr Abhijit Bhattacharya** **Core Faculty** Webinar **90m**	Toronto 1000 London 1500 Barcelona 1600 Paris 1600 Abu Dhabi 1900 Delhi 2030 Kathmandu 1945 Islamabad 2000	09/04/2026 Thursday
7. The Abnormal Lung-Part 2 • Consolidation • Pneumonia • Collapse • Pleural Effusion • RDS Grades and Atelectasis	**Dr Ashraf Alawadi** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	12/04/2026 Sunday
8. Airway-Sonography • **Trachea vs Esophagus** • **Applications** • **ET placement, ET Adjustment** • **Stridor**			16/04/2026 Thursday
Diagnosis and Therapy			
9. RDS in the Preterm Neonate • Lung US Scores for Diagnosis and Management • Protocols for Surfactant Administration • Pitfalls and Implementation in practice	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	19/04/2026 Sunday
10. LUS in diagnosis of BPD and Chronic lung disease	**Dr Abhijit Bhattacharya** **Core Faculty** Webinar **60m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000	23/04/2026 Thursday

11. LUS in the diagnosis and Management of Air leak Syndromes and Effusions	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700	26/04/2026 Sunday
12. LUS in the diagnosis in Infections and Pneumonia	**Dr Sujith Pereira** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	30/04/2026 Thursday
13. LUS in diagnosis of the Surgical Neonate and Infant	**Dr Nadya Yousef** **Core Faculty Webinar** **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	03/05/2026 Sunday
Lung US in Practice-Clinical Approach and Special Situations			
14. LUS in the diagnosis of respiratory failure, weaning of NIV and Optimizing Respiratory support	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	07/05/2026 Thursday
15. LUS and the Desaturating Neonate on the ventilator; Airway US vs LUS and Lung Recruitment	**Dr Alok Sharma** **Core Faculty** Webinar **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	10/05/2026 Sunday
16. Protocols for the Collapsing Neonate SAFE, SAFER, SONAR	**Dr Nadya Yousef** **Core Faculty Webinar** **90m**	Toronto 1100 London 1600 Barcelona 1700 Paris 1700 Abu Dhabi 2000 Delhi 2130 Islamabad 2100	14/05/2026 Thursday
Close			

Testing Window