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Building an Evidence Based Thoracic Ultrasound Training Program – The ERS Approach

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Educational background

2016-2019	Ph.D., Institute of Clinical Research, University of Southern Denmark
2016	Consultant, Internal Medicine: Respiratory Medicine
2004	First Lieutenant, Danish Armed Forces
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Professional experience

2022-Present	Lead Consultant, Head of Research and Ultrasound Director at the Department of Respiratory Medicine, Odense University Hospital, Odense, Denmark
2020-Present	Clinical Professor in Respiratory Medicine at the Institute of Clinical Research, University of Southern Denmark, Odense, Denmark
2018-Present	Head of Research, Department of Respiratory Medicine, Odense University Hospital, Odense, Denmark
2016-2022	Consultant in Respiratory Medicine and Ultrasound Director at the Department of Respiratory Medicine, Odense University Hospital, Odense, Denmark
2016-2020	Clinical Associate Professor, Institute of Clinical Research, University of Southern Denmark, Odense, Denmark

Thoracic ultrasound has become an essential component of respiratory medicine, offering real-time, radiation-free, point-of-care diagnosis of pleural and lung parenchymal pathology. However, the rapid expansion of clinical use has outpaced standardization in education and competency assessment. This presentation outlines the European Respiratory Society's (ERS) structured, evidence-based approach to developing a comprehensive thoracic ultrasound training program designed to ensure high-quality, reproducible practice across Europe.

The ERS framework integrates current evidence, international guidelines, and expert consensus to define core competencies across three levels of proficiency—basic, advanced, and expert. The curriculum emphasizes blended learning through interactive e-learning modules, hands-on workshops, supervised clinical practice, and standardized assessment using validated evaluation tools. The program is informed by educational research in ultrasound skill acquisition, simulation-based training, and competency-based medical education principles.

Key outcomes include a harmonized curriculum, transparent certification pathways, and alignment with European training standards in respiratory medicine. Ongoing data collection and outcome analysis ensure that the program remains dynamic, responsive to new evidence, and reflective of real-world clinical needs.

This presentation will discuss lessons learned from pilot implementations, challenges in achieving international standardization, and future directions, including digital learning innovations and interprofessional collaboration.